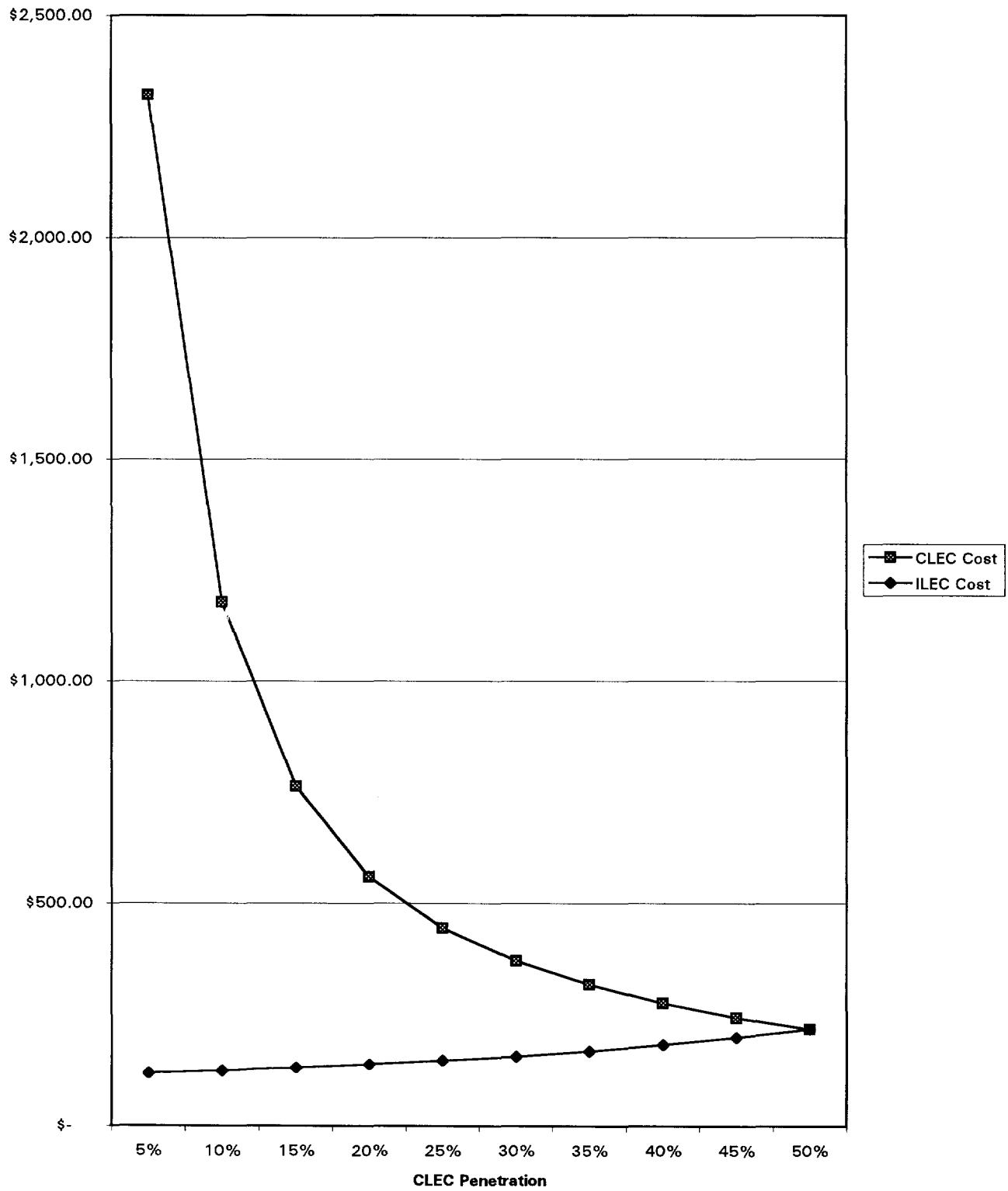
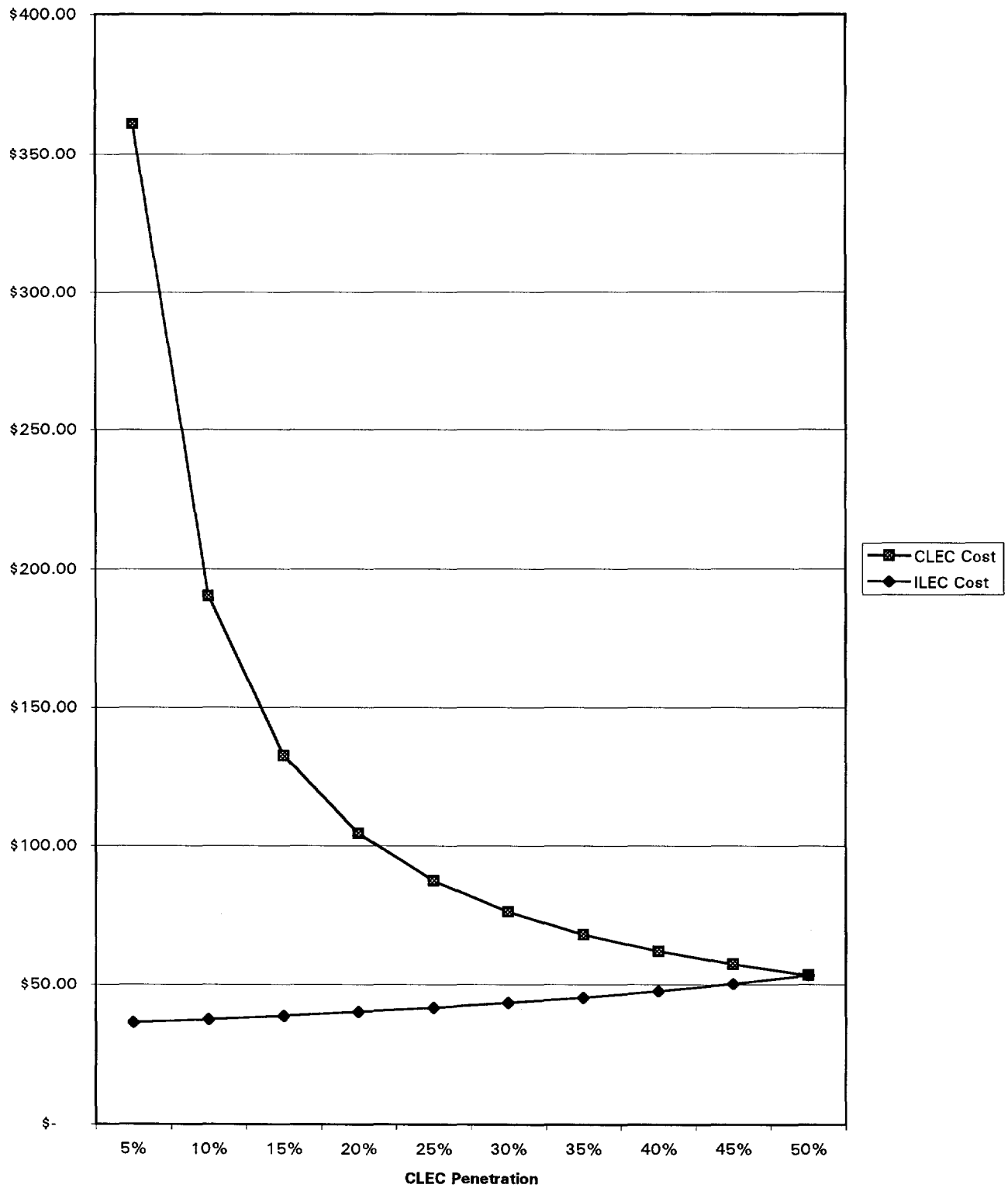


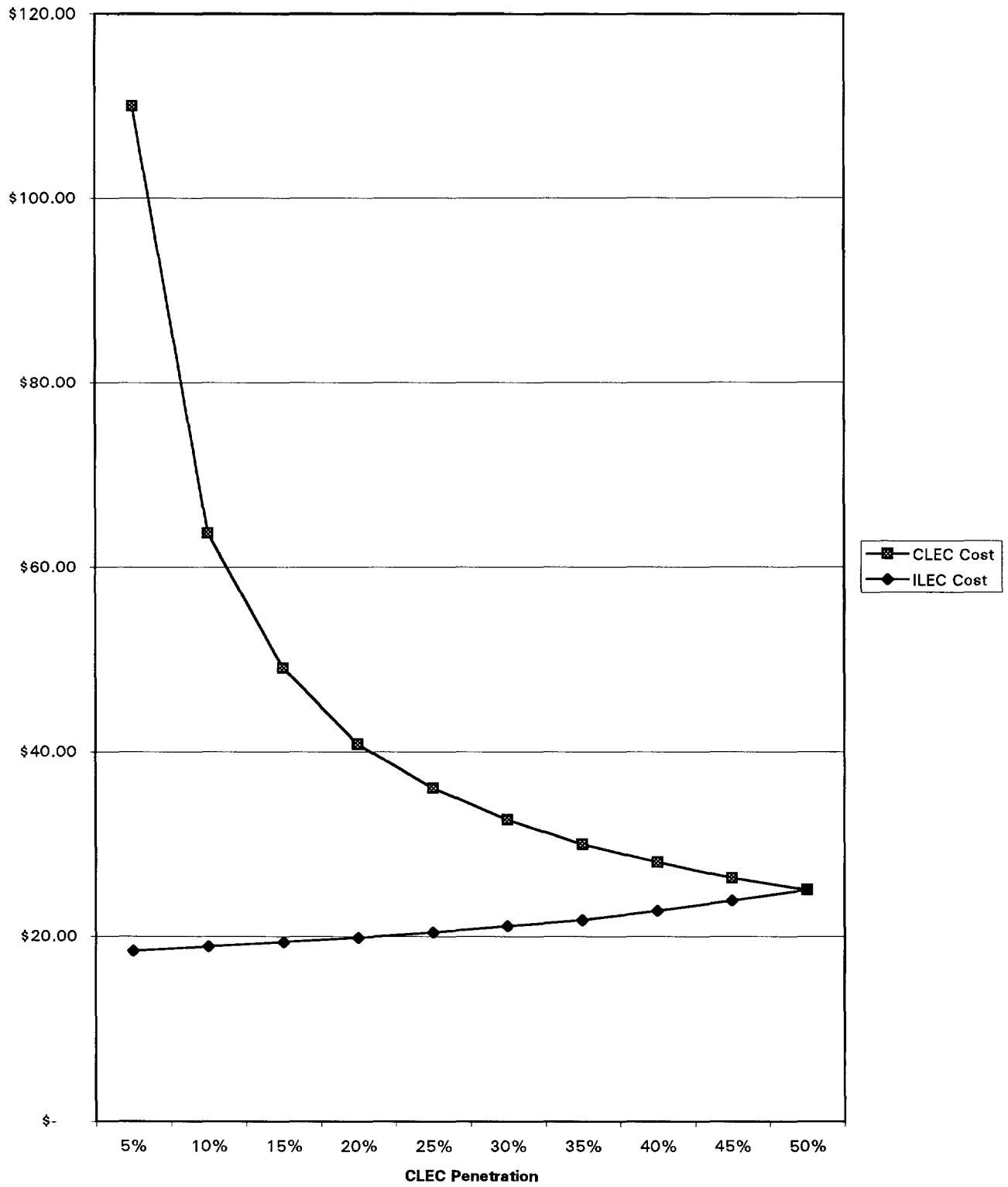
Loop 0-5 Lines/sq. mi.



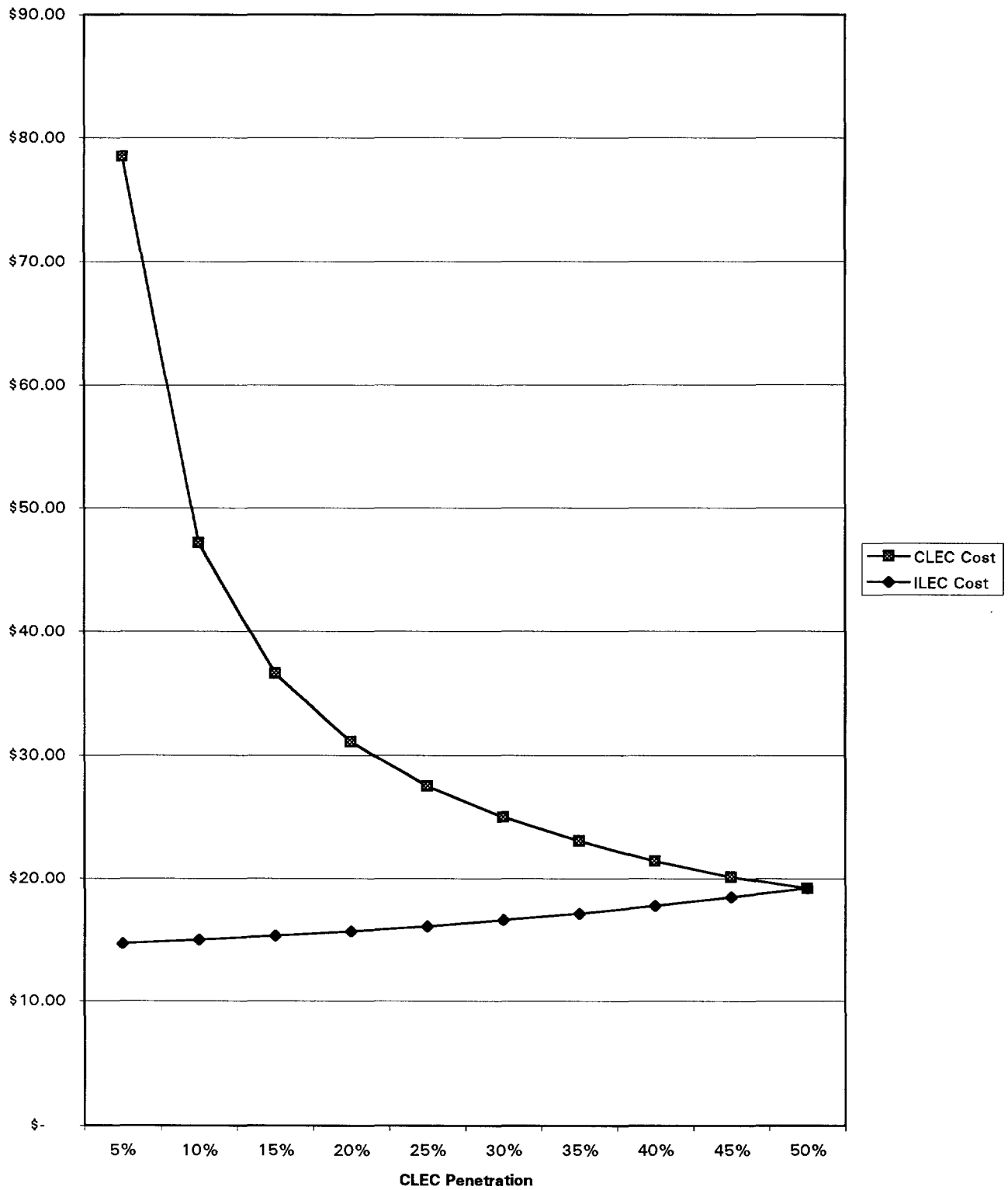
Loop 5-100 lines/sq. mi.



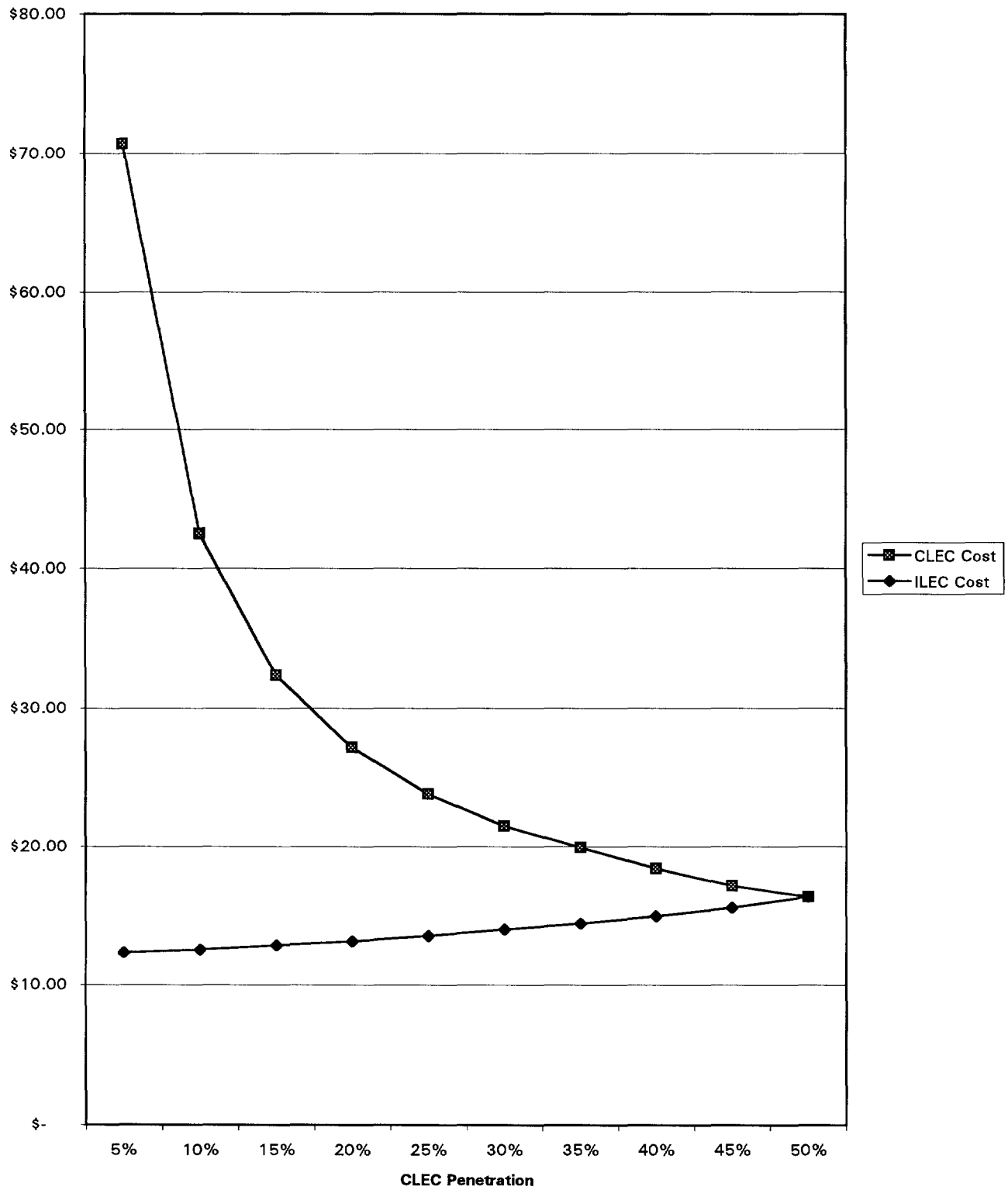
Loop 100-250 lines/sq. mi.



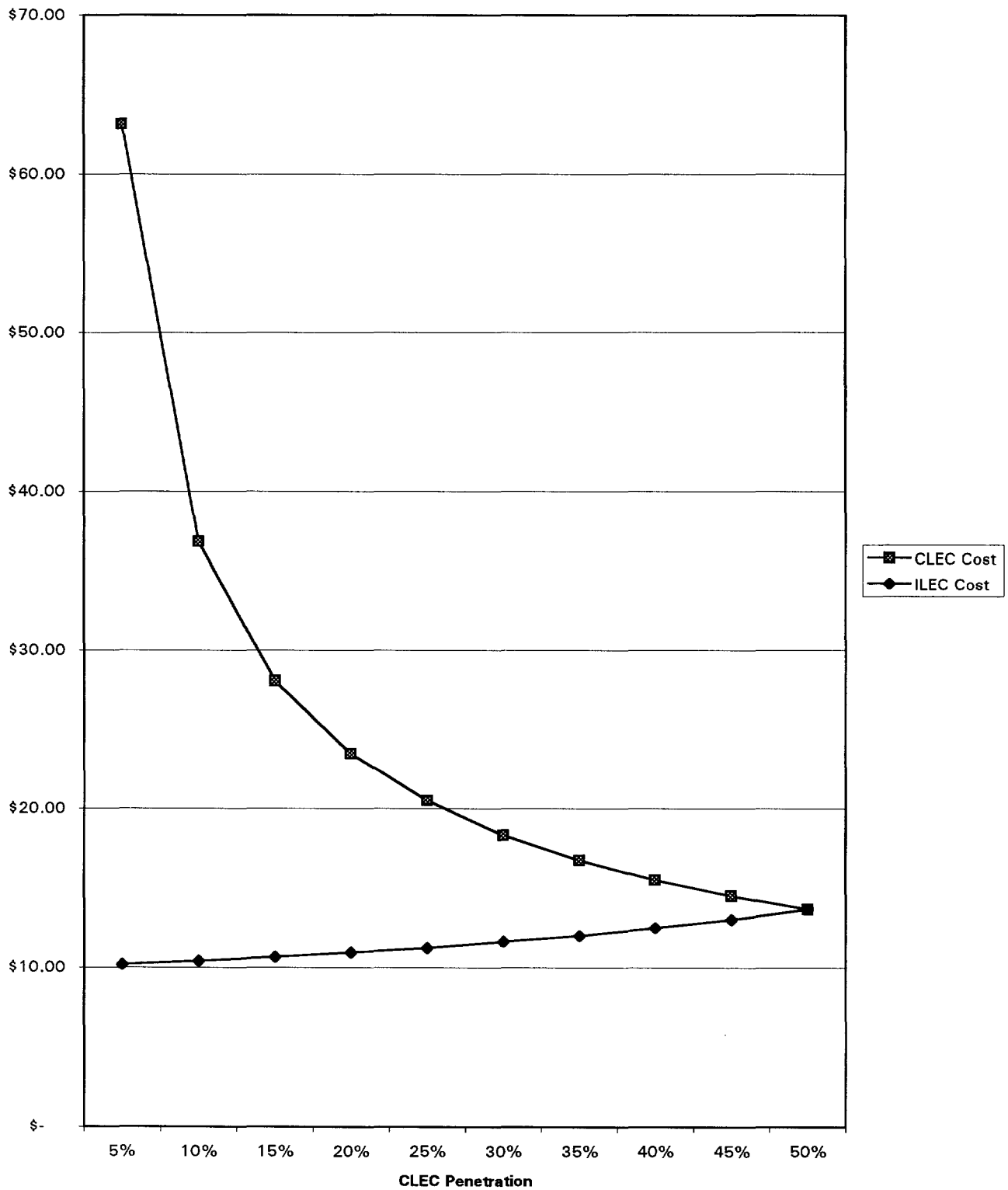
Loop 250-650 lines/sq. mi.



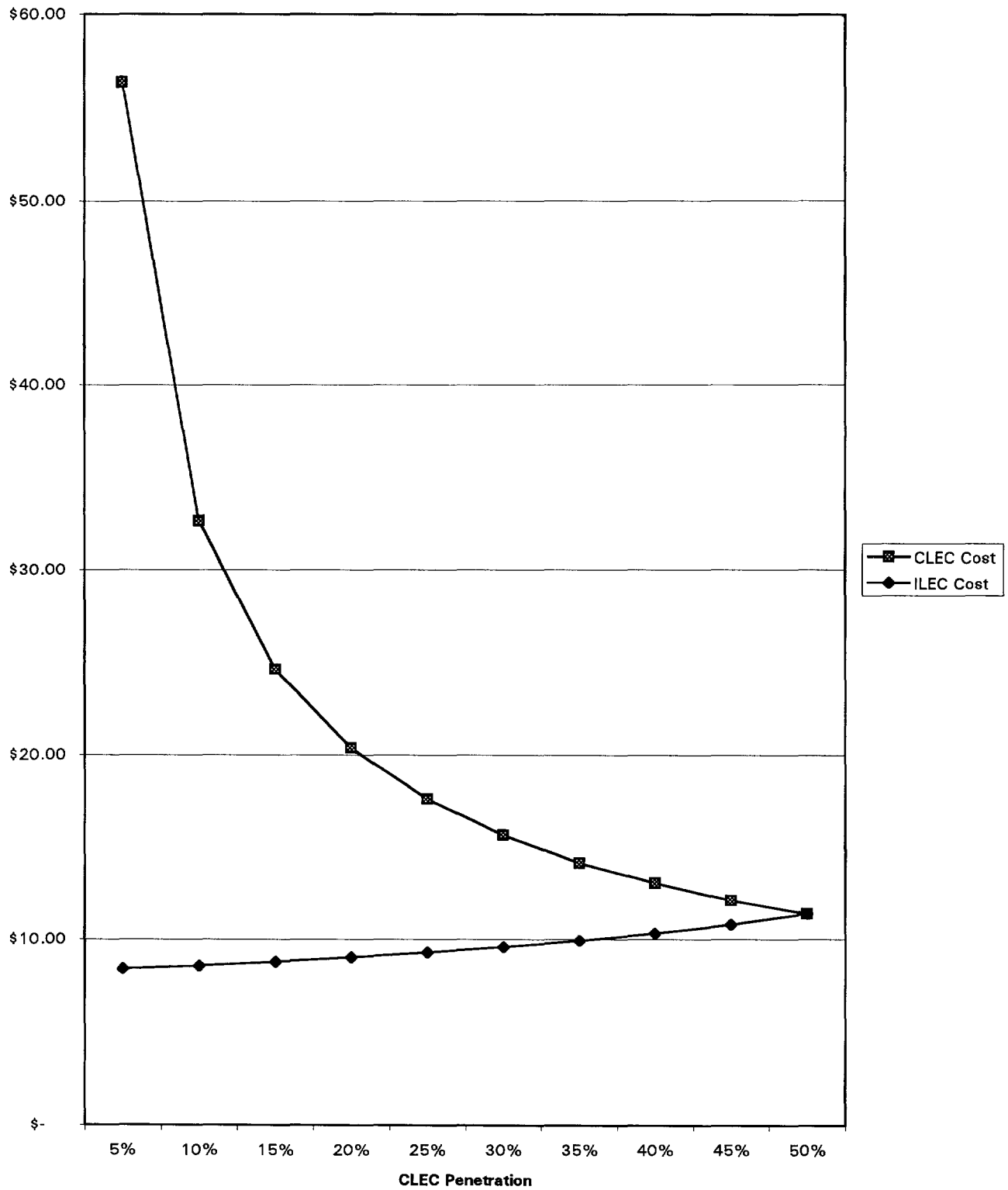
Loop 650-850 lines/sq. mi.



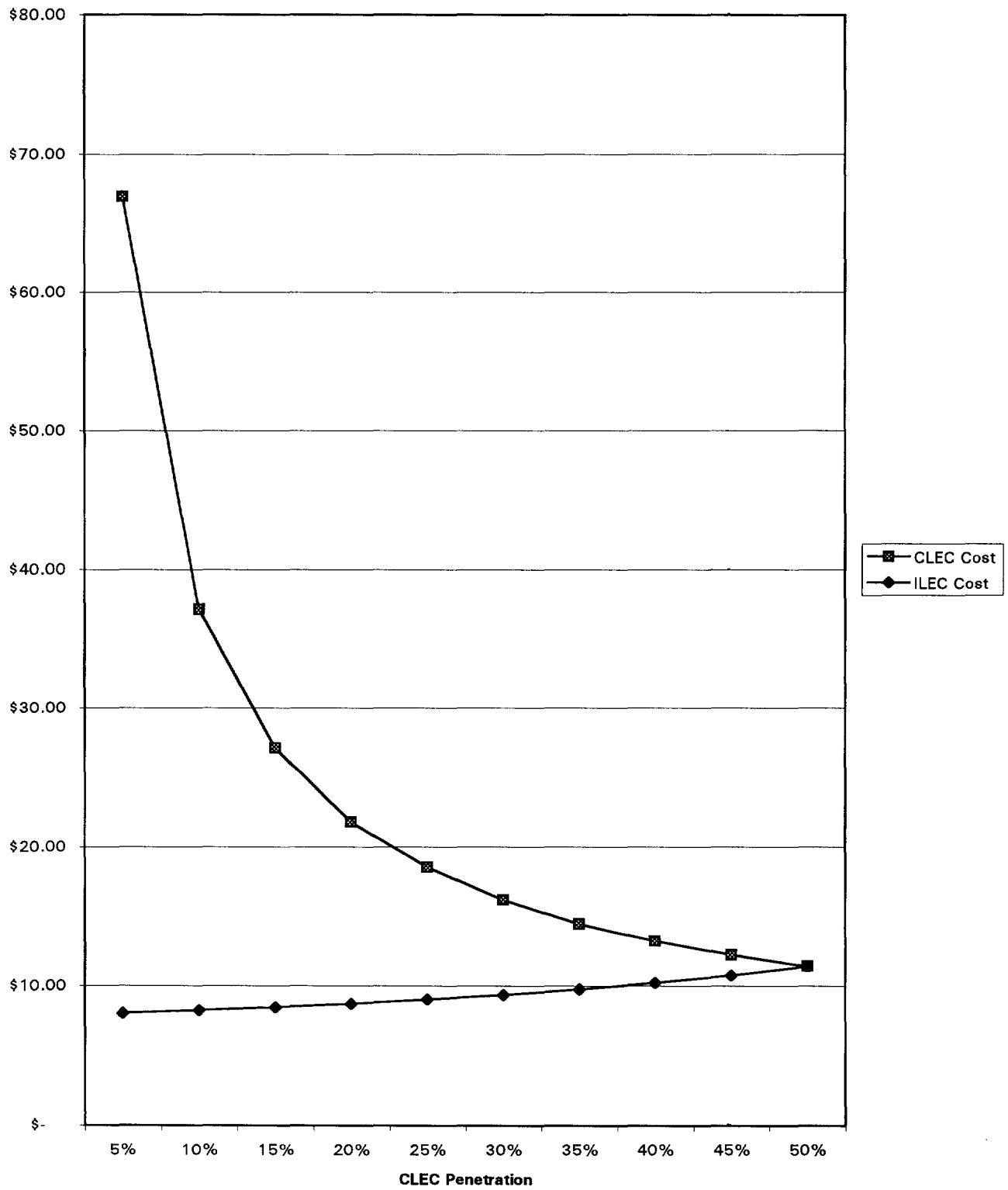
Loop 850-2,550 lines/sq. mi.



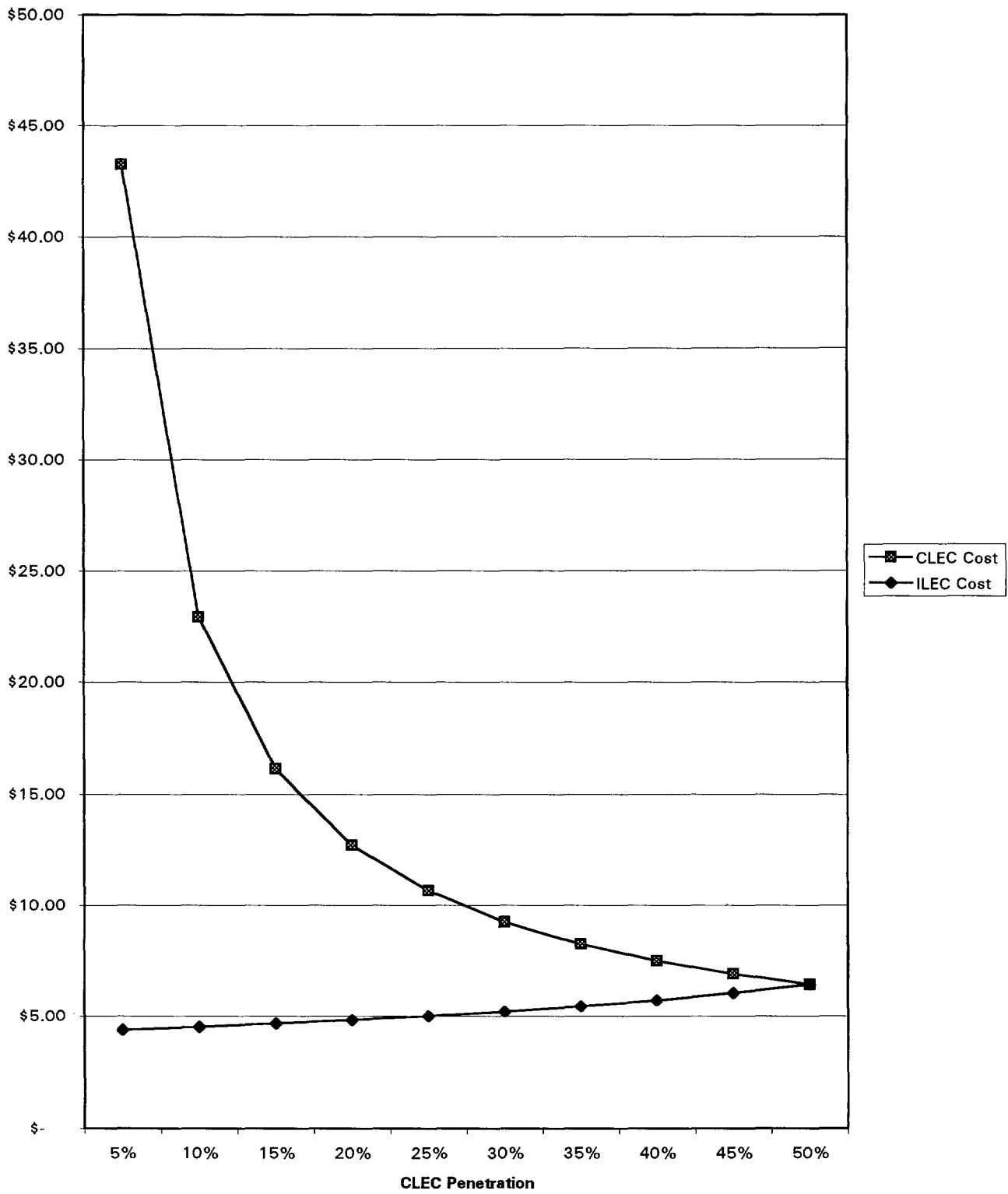
Loop 2,550-5,000 lines/sq. mi.

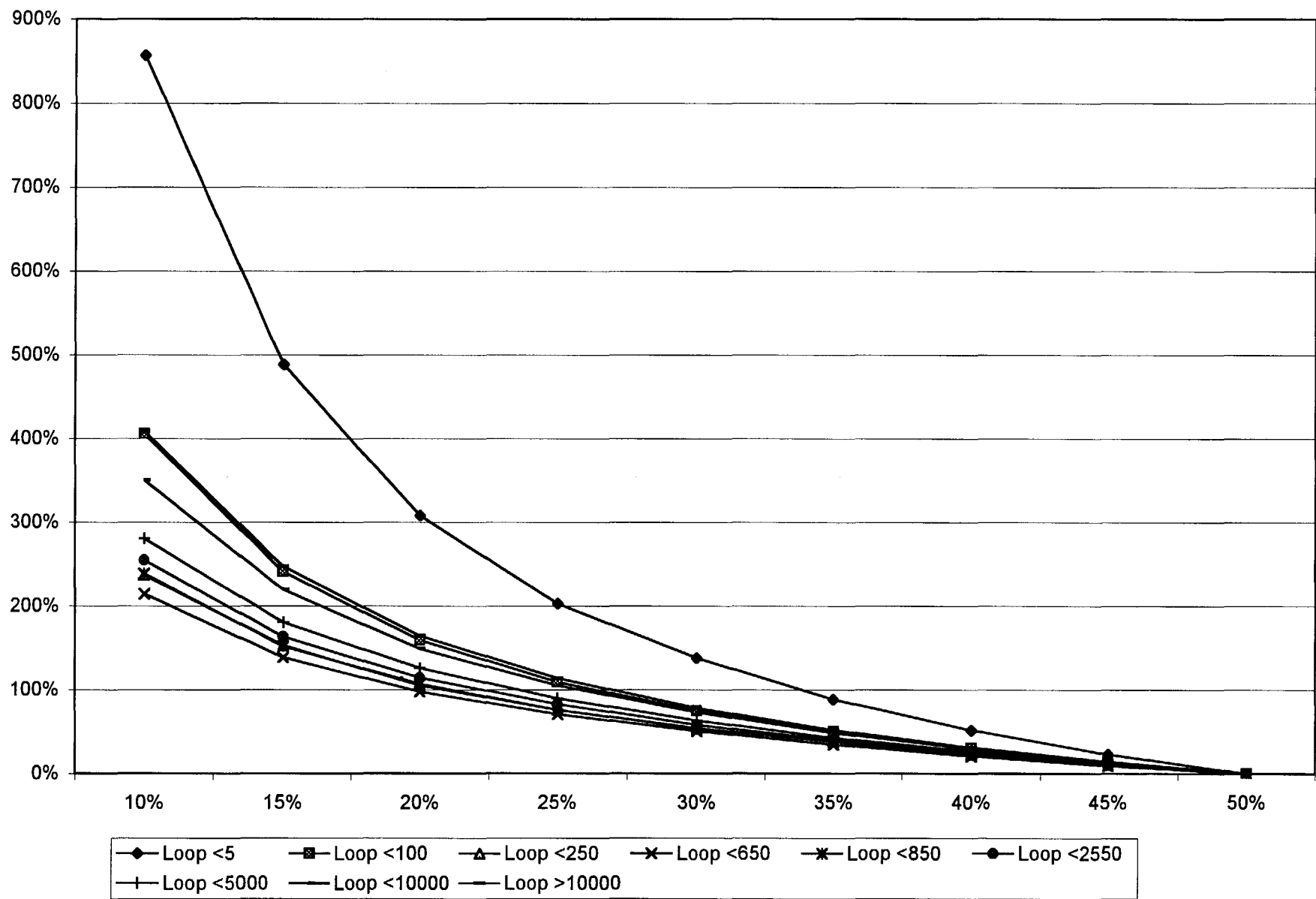


Loop 5,000-10,000 lines/sq. mi.

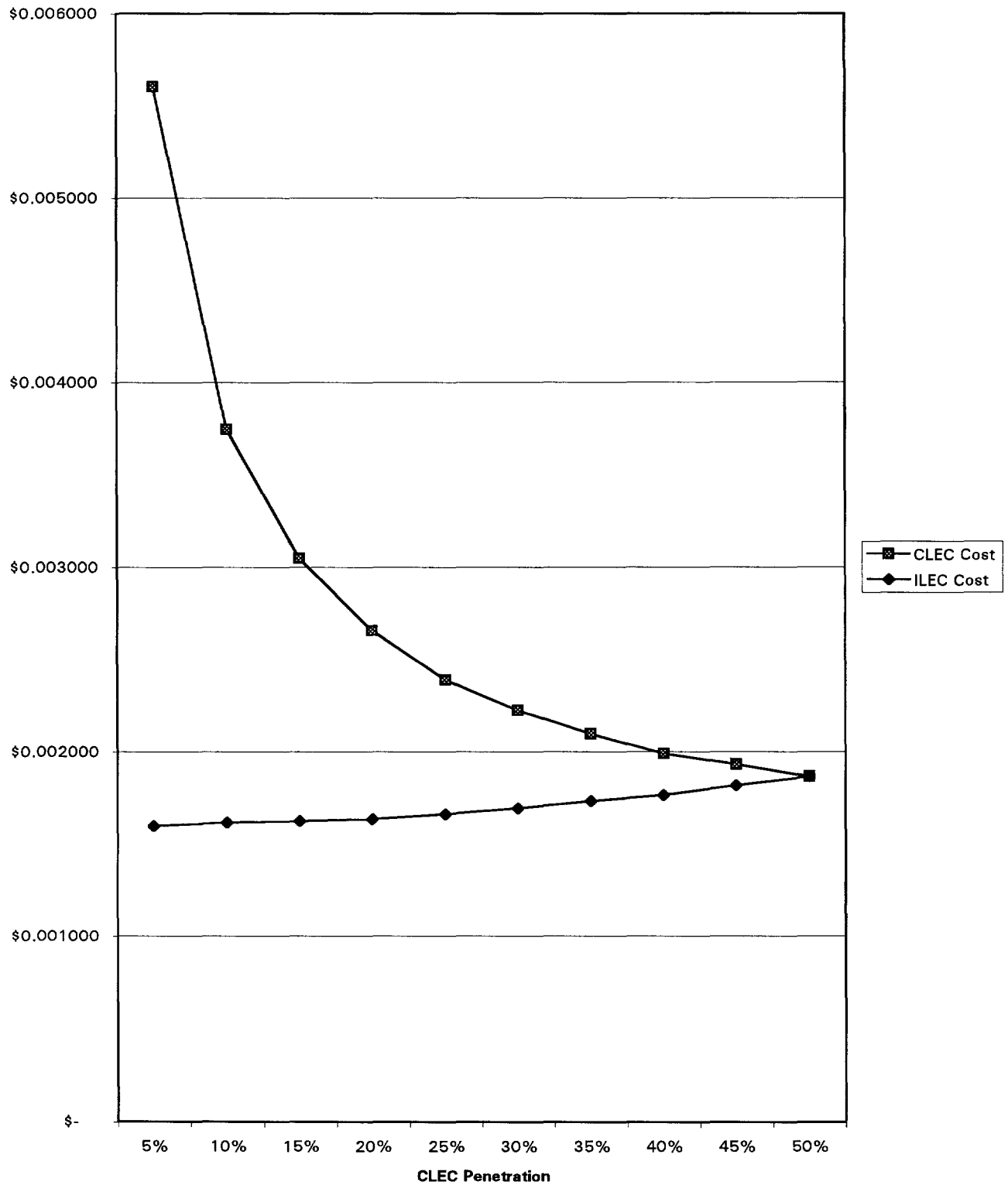


Loop > 10,000 lines/sq. mi.

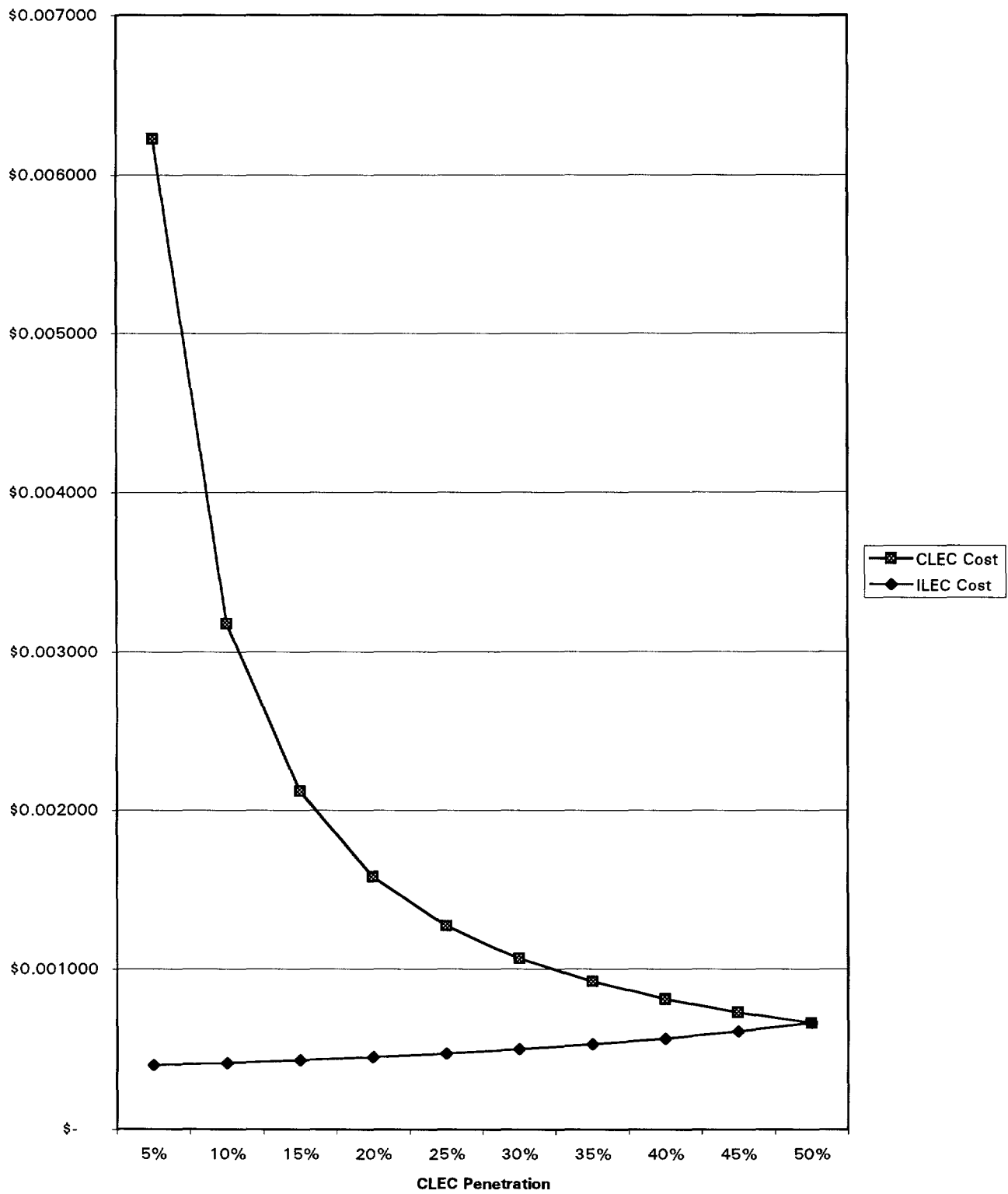




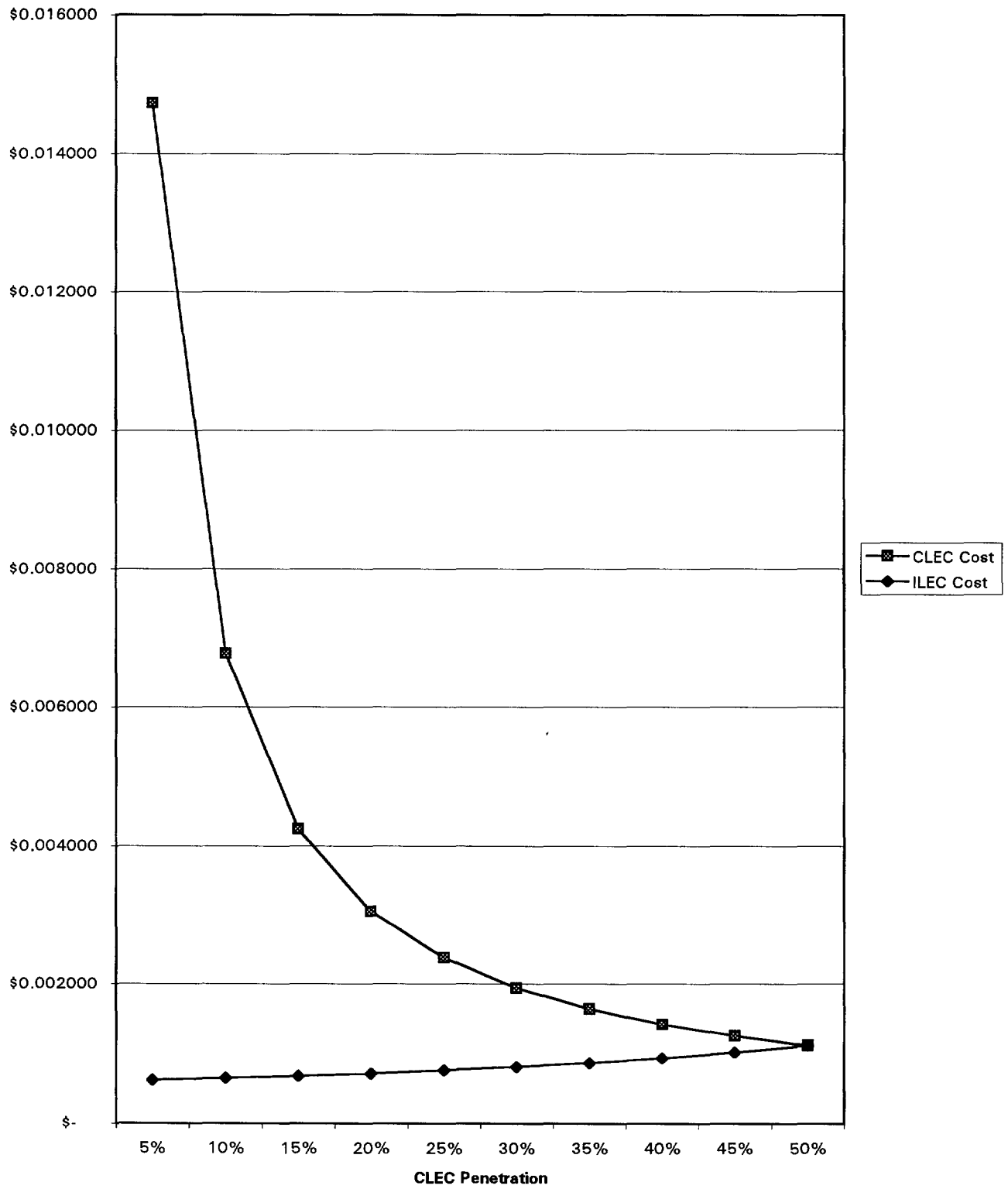
End Office Switching



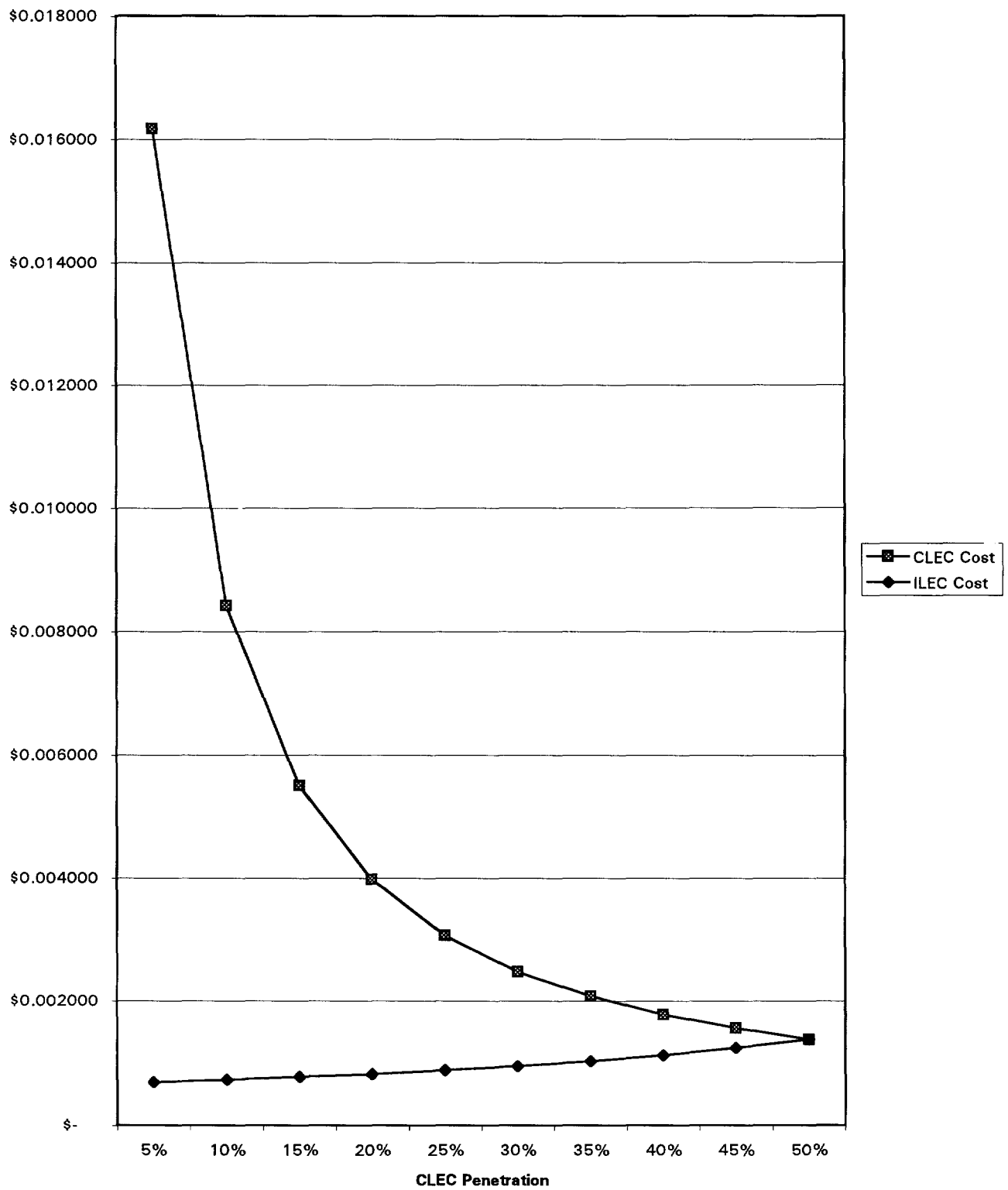
Dedicated Transport

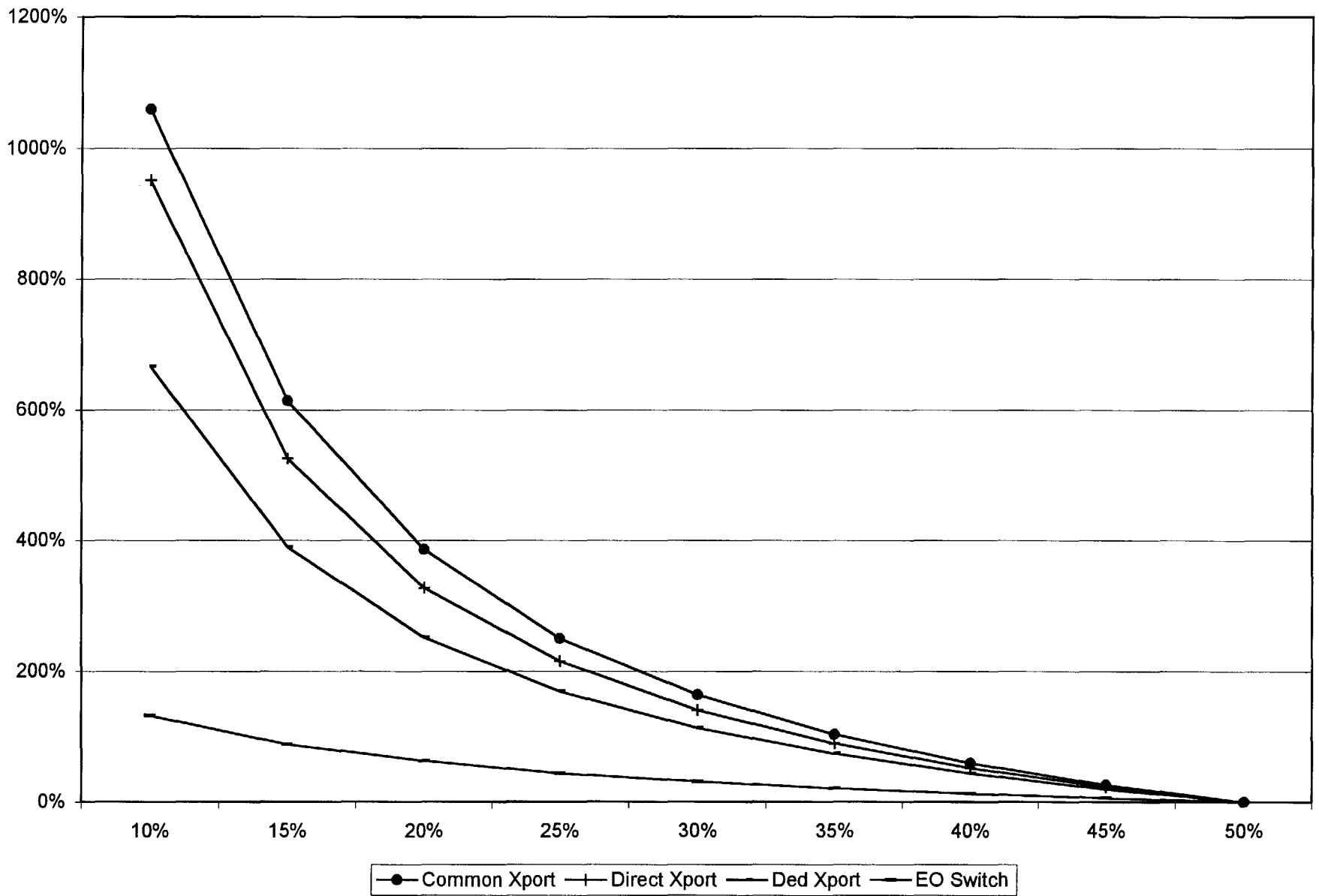


Direct Transport



Common Transport





B

Total Loop (all)

Default	Annual Cost	\$	6,942,278	\$	228,593,109	\$	60,014,913	\$	101,808,267	\$	30,794,516	\$	190,748,586	\$	148,994,782	\$	154,509,803	\$	288,802,344	\$	1,211,208,598
	Unit Cost/month		112.45		35.56		18.08		14.45		12.09		9.99		8.27		7.89		4.26		8.42
5%	Annual Cost	\$	7,165,148	\$	115,944,279	\$	18,259,406	\$	27,666,368	\$	9,000,483	\$	60,274,889	\$	50,831,478	\$	65,501,211	\$	146,478,817	\$	501,122,159
	Unit Cost/month		2,321.20		360.75		110.03		78.52		70.87		83.16		56.40		66.92		43.25		69.69
10%	Annual Cost	\$	7,273,398	\$	122,300,937	\$	21,108,794	\$	33,205,169	\$	10,615,107	\$	70,303,788	\$	58,781,310	\$	72,678,573	\$	155,220,501	\$	551,685,567
	Unit Cost/month		1,178.13		190.26		63.60		47.12		42.46		36.83		32.61		37.13		22.92		38.36
15%	Annual Cost	\$	7,063,143	\$	127,676,173	\$	24,408,608	\$	38,644,514	\$	12,356,888	\$	80,330,834	\$	66,585,853	\$	79,586,780	\$	163,848,908	\$	600,480,679
	Unit Cost/month		762.72		132.42		49.03		36.56		32.34		28.06		24.63		27.10		16.13		27.83
20%	Annual Cost	\$	6,905,411	\$	134,088,823	\$	27,080,457	\$	43,766,952	\$	13,841,182	\$	89,520,955	\$	73,389,866	\$	85,180,400	\$	172,241,198	\$	646,015,243
	Unit Cost/month		559.26		104.30		40.80		31.05		27.17		23.45		20.36		21.76		12.71		22.46
25%	Annual Cost	\$	6,848,303	\$	140,354,478	\$	29,893,572	\$	48,409,336	\$	15,142,645	\$	97,843,155	\$	79,300,585	\$	90,720,192	\$	180,491,147	\$	889,003,412
	Unit Cost/month		443.71		87.34		36.03		27.48		15,142.645		20.50		17.60		18.54		10.66		19.16
30%	Annual Cost	\$	6,834,581	\$	146,673,713	\$	32,494,482	\$	52,797,222	\$	16,402,201	\$	104,880,810	\$	84,586,582	\$	95,086,988	\$	188,143,187	\$	727,899,768
	Unit Cost/month		369.02		78.06		32.64		24.97		21.46		18.32		15.64		16.19		9.26		16.87
35%	Annual Cost	\$	6,823,243	\$	153,067,144	\$	34,815,394	\$	56,807,853	\$	17,743,194	\$	111,905,409	\$	89,206,925	\$	99,068,681	\$	195,573,844	\$	765,011,688
	Unit Cost/month		315.78		68.04		29.97		23.03		19.90		16.75		14.14		14.46		8.25		15.20
40%	Annual Cost	\$	6,799,845	\$	159,446,818	\$	37,213,617	\$	60,333,416	\$	18,749,450	\$	118,297,147	\$	94,105,982	\$	103,845,345	\$	202,887,795	\$	801,479,195
	Unit Cost/month		275.35		62.01		28.03		21.40		18.40		15.49		13.06		13.24		7.49		13.93
45%	Annual Cost	\$	6,760,762	\$	165,766,900	\$	39,338,278	\$	63,827,188	\$	19,827,167	\$	124,520,386	\$	98,236,285	\$	107,832,604	\$	210,288,082	\$	836,197,658
	Unit Cost/month		243.36		57.31		26.34		20.13		17.12		14.50		12.11		12.24		6.90		12.92
50%	Annual Cost	\$	6,716,741	\$	171,725,399	\$	41,619,424	\$	67,673,888	\$	20,802,487	\$	130,488,847	\$	102,690,540	\$	111,867,004	\$	217,412,828	\$	870,996,960
	Unit Cost/month		217.59		53.43		25.08		19.21		16.33		13.67		11.39		11.43		6.42		12.11
55%	Annual Cost	\$	6,723,086	\$	177,853,595	\$	43,635,478	\$	71,627,627	\$	21,779,695	\$	136,721,902	\$	107,198,065	\$	115,834,521	\$	224,661,771	\$	906,035,741
	Unit Cost/month		198.00		50.31		23.90		18.48		15.55		13.02		10.81		10.76		6.03		11.45
60%	Annual Cost	\$	6,727,806	\$	183,693,981	\$	45,382,587	\$	75,106,765	\$	22,838,885	\$	142,896,311	\$	111,740,078	\$	120,100,932	\$	232,031,393	\$	940,518,740
	Unit Cost/month		181.63		47.83		22.79		17.76		14.94		12.48		10.33		10.23		5.71		10.90
65%	Annual Cost	\$	6,720,695	\$	189,335,145	\$	46,970,793	\$	78,394,531	\$	23,839,029	\$	148,792,085	\$	116,256,299	\$	124,136,906	\$	238,997,396	\$	973,442,879
	Unit Cost/month		167.48		45.31		21.77		17.11		14.40		11.99		9.92		9.78		5.43		10.41
70%	Annual Cost	\$	6,705,136	\$	195,687,937	\$	49,150,775	\$	81,846,329	\$	24,922,833	\$	155,034,655	\$	120,825,157	\$	128,431,139	\$	246,080,640	\$	1,008,884,400
	Unit Cost/month		155.16		43.49		21.18		16.59		13.98		11.60		9.58		9.37		5.19		10.02
75%	Annual Cost	\$	6,780,123	\$	201,061,480	\$	50,935,217	\$	85,090,185	\$	25,862,972	\$	160,843,812	\$	125,507,058	\$	132,648,350	\$	253,263,419	\$	1,041,792,417
	Unit Cost/month		146.43		41.71		20.46		16.10		13.54		11.22		9.28		9.03		4.98		9.66
80%	Annual Cost	\$	6,766,694	\$	206,968,960	\$	52,773,967	\$	88,426,446	\$	26,753,443	\$	168,975,425	\$	130,027,668	\$	136,850,320	\$	260,471,157	\$	1,076,013,978
	Unit Cost/month		137.01		40.25		19.68		15.66		13.13		10.93		9.02		8.74		4.81		9.35
85%	Annual Cost	\$	6,797,776	\$	212,140,683	\$	54,741,882	\$	91,792,737	\$	27,839,658	\$	172,754,080	\$	134,884,993	\$	141,171,072	\$	267,864,080		
	Unit Cost/month		129.54		38.63		19.40		15.32		12.86		10.65		8.79		8.48		4.65		
90%	Annual Cost	\$	6,841,645	\$	217,658,544	\$	58,405,234	\$	95,105,533	\$	28,731,576	\$	178,581,768	\$	139,019,552	\$	145,409,430	\$	274,782,013		
	Unit Cost/month		123.13		37.82		18.88		14.99		12.53		10.40		8.57		8.25		4.51		
95%	Annual Cost	\$	6,696,831	\$	223,352,962	\$	58,149,865	\$	98,507,064	\$	29,833,543	\$	184,653,063	\$	143,828,998	\$	149,718,677	\$	281,542,609		
	Unit Cost/month		117.63		36.58		18.44		14.71		12.33		10.18		8.41		8.06		4.38		

100%

End office switching	\$	395,769,650						
Line Port		118,730,895	11,052,233	switched lines	\$	0.90	per line/month	
Non-Line Port		277,038,755	175,190,640,718	actual minutes	\$	0.00158	per actual minute	
Signaling network elements	\$	16,710,723						
Links		686,939	1,844	links	\$	31.05	per link per month	
STP		8,952,877	113,162,766,037	TCAP+ISUP msgs	\$	0.00008	per signaling message	
SCP		7,070,907	5,754,616,400	TCAP queries	\$	0.00123	per query	
Transport network elements								
<i>Dedicated</i>								
Sw+Sp Transport	\$	26,137,577	1,340,353	trunks	\$	1.63	per DS-0 equivalent per month	
Switched		7,942,523	407,298	trunks	\$	0.00016	per minute	
Special		18,195,054	933,055	trunks				
Transmission Terminal		36,814,291	1,340,353	trunks	\$	2.29	per DS-0 equivalent per month	
					\$	0.00023	per minute	
					\$	0.00039	total per minute	
<i>Common</i>								
Transport	\$	4,966,843	11,040,969,587	minutes	\$	0.00042	per minute per leg (orig or term)	
Transmission Terminal		2,854,971	11,040,969,587	minutes	\$	0.00024	per minute	
					\$	0.00065	total per minute	
<i>Direct</i>								
Transport	\$	14,740,222	44,641,646,996	minutes	\$	0.00033	per minute	
Transmission Terminal		11,532,938	44,641,646,996	minutes	\$	0.00026	per minute	
					\$	0.00059	total per minute	
Tandem switch	\$	7,078,159	9,796,226,767	minutes	\$	0.00072	per minute	

5%

End office switching	\$	70,151,189						
Line Port		21,045,357	552,612	switched lines	\$	3.17	per line/month	
Non-Line Port		49,105,832	8,759,532,036	actual minutes	\$	0.00561	per actual minute	
Signaling network elements	\$	24,331,596						
Links		7,312,488	1,583	links	\$	384.87	per link per month	
STP		15,524,225	5,658,138,302	TCAP+ISUP msgs	\$	0.00274	per signaling message	
SCP		1,494,883	287,730,820	TCAP queries	\$	0.00520	per query	
Transport network elements								
<i>Dedicated</i>								
Sw+Sp Transport	\$	35,757,248	70,584	trunks	\$	42.22	per DS-0 equivalent per month	
Switched		12,123,233	23,931	trunks	\$	0.00420	per minute	
Special		23,634,014	46,653	trunks				
Transmission Terminal		17,218,821	70,584	trunks	\$	20.33	per DS-0 equivalent per month	
					\$	0.00202	per minute	
					\$	0.00623	total per minute	
<i>Common</i>								
Transport	\$	15,190,670	552,048,479	minutes	\$	0.01335	per minute per leg (orig or term)	
Transmission Terminal		3,217,056	552,048,479	minutes	\$	0.00283	per minute	
					\$	0.01618	total per minute	
<i>Direct</i>								
Transport	\$	25,721,419	2,232,082,350	minutes	\$	0.01152	per minute	
Transmission Terminal		7,163,993	2,232,082,350	minutes	\$	0.00321	per minute	
					\$	0.01473	total per minute	
Tandem switch	\$	7,738,670	489,811,338	minutes	\$	0.01580	per minute	

10%

End office switching	\$	93,748,236						
Line Port		28,124,471	1,105,223	switched lines	\$	2.12	per line/month	
Non-Line Port		65,623,765	17,519,064,072	actual minutes	\$	0.00375	per actual minute	
Signaling network elements	\$	20,500,364						
Links		4,802,949	1,583	links	\$	252.79	per link per month	
STP		13,777,641	11,316,276,604	TCAP+ISUP msgs	\$	0.00122	per signaling message	
SCP		1,919,773	575,461,640	TCAP queries	\$	0.00334	per query	
Transport network elements								
<i>Dedicated</i>								
Sw+Sp Transport	\$	34,781,737	137,491	trunks	\$	21.08	per DS-0 equivalent per month	

	Switched	11,177,848	44,186	trunks	\$	0.00210	per minute
	Special	23,603,890	93,306	trunks			
	Transmission Terminal	17,865,861	137,491	trunks	\$	10.83	per DS-0 equivalent per month
					\$	0.00108	per minute
					\$	0.00318	total per minute
<i>Common</i>							
	Transport	\$ 12,078,615	1,104,096,959	minutes	\$	0.00692	per minute per leg (orig or term)
	Transmission Terminal	2,620,037	1,104,096,959	minutes	\$	0.00150	per minute
					\$	0.00843	total per minute
<i>Direct</i>							
	Transport	\$ 23,309,193	4,464,164,700	minutes	\$	0.00522	per minute
	Transmission Terminal	6,879,254	4,464,164,700	minutes	\$	0.00154	per minute
					\$	0.00676	total per minute
Tandem switch		\$ 7,311,225	979,622,677	minutes	\$	0.00746	per minute
15%							
End office switching		\$ 114,387,125					
	Line Port	34,316,138	1,657,835	switched lines	\$	1.72	per line/month
	Non-Line Port	80,070,988	26,278,596,108	actual minutes	\$	0.00305	per actual minute
Signaling network elements		\$ 18,460,890					
	Links	3,587,698	1,583	links	\$	188.83	per link per month
	STP	12,578,987	16,974,414,906	TCAP+ISUP msgs	\$	0.00074	per signaling message
	SCP	2,294,206	863,192,460	TCAP queries	\$	0.00266	per query
Transport network elements							
<i>Dedicated</i>							
	Sw+Sp Transport	\$ 33,479,360	204,378	trunks	\$	13.65	per DS-0 equivalent per month
	Switched	10,552,641	64,420	trunks	\$	0.00136	per minute
	Special	22,926,718	139,958	trunks			
	Transmission Terminal	18,727,578	204,378	trunks	\$	7.64	per DS-0 equivalent per month
					\$	0.00076	per minute
					\$	0.00212	total per minute
<i>Common</i>							
	Transport	\$ 10,437,088	1,656,145,438	minutes	\$	0.00448	per minute per leg (orig or term)
	Transmission Terminal	2,382,743	1,656,145,438	minutes	\$	0.00102	per minute
					\$	0.00550	total per minute
<i>Direct</i>							
	Transport	\$ 21,472,560	6,696,247,049	minutes	\$	0.00321	per minute
	Transmission Terminal	6,885,595	6,696,247,049	minutes	\$	0.00103	per minute
					\$	0.00423	total per minute
Tandem switch		\$ 7,015,551	1,469,434,015	minutes	\$	0.00477	per minute
20%							
End office switching		\$ 132,998,055					
	Line Port	39,899,417	2,210,447	switched lines	\$	1.50	per line/month
	Non-Line Port	93,098,639	35,038,128,144	actual minutes	\$	0.00266	per actual minute
Signaling network elements		\$ 17,216,457					
	Links	2,855,092	1,585	links	\$	150.11	per link per month
	STP	11,720,144	22,632,553,207	TCAP+ISUP msgs	\$	0.00052	per signaling message
	SCP	2,641,221	1,150,923,280	TCAP queries	\$	0.00229	per query
Transport network elements							
<i>Dedicated</i>							
	Sw+Sp Transport	\$ 32,309,805	271,350	trunks	\$	9.92	per DS-0 equivalent per month
	Switched	10,089,957	84,739	trunks	\$	0.00099	per minute
	Special	22,219,848	186,611	trunks			
	Transmission Terminal	19,440,518	271,350	trunks	\$	5.97	per DS-0 equivalent per month
					\$	0.00059	per minute
					\$	0.00158	total per minute
<i>Common</i>							
	Transport	\$ 9,334,758	2,208,193,917	minutes	\$	0.00320	per minute per leg (orig or term)
	Transmission Terminal	2,252,032	2,208,193,917	minutes	\$	0.00077	per minute
					\$	0.00398	total per minute
<i>Direct</i>							
	Transport	\$ 20,235,398	8,928,329,399	minutes	\$	0.00227	per minute
	Transmission Terminal	6,949,096	8,928,329,399	minutes	\$	0.00078	per minute
					\$	0.00304	total per minute

Tandem switch	\$	6,827,893	1,959,245,353	minutes	\$	0.00348	per minute
25%							
End office switching	\$	149,331,216					
Line Port		44,799,365	2,763,058	switched lines	\$	1.35	per line/month
Non-Line Port		104,531,851	43,797,660,180	actual minutes	\$	0.00239	per actual minute
Signaling network elements	\$	16,449,298					
Links		2,388,275	1,591	links	\$	125.13	per link per month
STP		11,088,208	28,290,691,509	TCAP+ISUP msgs	\$	0.00039	per signaling message
SCP		2,972,815	1,438,654,100	TCAP queries	\$	0.00207	per query
Transport network elements							
<i>Dedicated</i>							
Sw+Sp Transport	\$	31,346,868	338,318	trunks	\$	7.72	per DS-0 equivalent per month
Switched		9,733,807	105,054	trunks	\$	0.00077	per minute
Special		21,613,060	233,264	trunks			
Transmission Terminal		20,438,665	338,318	trunks	\$	5.03	per DS-0 equivalent per month
					\$	0.00050	per minute
					\$	0.00127	total per minute
<i>Common</i>							
Transport	\$	8,488,041	2,760,242,397	minutes	\$	0.00243	per minute per leg (orig or term)
Transmission Terminal		2,204,580	2,760,242,397	minutes	\$	0.00063	per minute
					\$	0.00307	total per minute
<i>Direct</i>							
Transport	\$	19,390,401	11,160,411,749	minutes	\$	0.00174	per minute
Transmission Terminal		7,175,667	11,160,411,749	minutes	\$	0.00064	per minute
					\$	0.00238	total per minute
Tandem switch	\$	6,711,477	2,449,056,692	minutes	\$	0.00274	per minute
30%							
End office switching	\$	166,843,206					
Line Port		50,052,962	3,315,670	switched lines	\$	1.26	per line/month
Non-Line Port		116,790,244	52,557,192,215	actual minutes	\$	0.00222	per actual minute
Signaling network elements	\$	15,917,337					
Links		2,049,923	1,597	links	\$	106.95	per link per month
STP		10,580,328	33,948,829,811	TCAP+ISUP msgs	\$	0.00031	per signaling message
SCP		3,287,085	1,726,384,920	TCAP queries	\$	0.00190	per query
Transport network elements							
<i>Dedicated</i>							
Sw+Sp Transport	\$	30,596,322	405,337	trunks	\$	6.29	per DS-0 equivalent per month
Switched		9,467,180	125,420	trunks	\$	0.00063	per minute
Special		21,129,142	279,917	trunks			
Transmission Terminal		21,377,538	405,337	trunks	\$	4.40	per DS-0 equivalent per month
					\$	0.00044	per minute
					\$	0.00106	total per minute
<i>Common</i>							
Transport	\$	7,886,932	3,312,290,876	minutes	\$	0.00194	per minute per leg (orig or term)
Transmission Terminal		2,184,749	3,312,290,876	minutes	\$	0.00054	per minute
					\$	0.00248	total per minute
<i>Direct</i>							
Transport	\$	18,571,591	13,392,494,099	minutes	\$	0.00139	per minute
Transmission Terminal		7,378,399	13,392,494,099	minutes	\$	0.00055	per minute
					\$	0.00194	total per minute
Tandem switch	\$	6,634,574	2,938,868,030	minutes	\$	0.00226	per minute
35%							
End office switching	\$	183,462,452					
Line Port		55,038,736	3,868,282	switched lines	\$	1.19	per line/month
Non-Line Port		128,423,716	61,316,724,251	actual minutes	\$	0.00209	per actual minute
Signaling network elements	\$	15,569,661					
Links		1,798,950	1,608	links	\$	93.24	per link per month
STP		10,178,859	39,606,968,113	TCAP+ISUP msgs	\$	0.00026	per signaling message
SCP		3,591,852	2,014,115,740	TCAP queries	\$	0.00178	per query

Transport network elements						
<i>Dedicated</i>						
Sw+Sp Transport	\$	29,929,729	471,684	trunks	\$	5.29 per DS-0 equivalent per month
Switched		9,207,966	145,115	trunks	\$	0.00053 per minute
Special		20,721,764	326,569	trunks		
Transmission Terminal		22,476,558	471,684	trunks	\$	3.97 per DS-0 equivalent per month
					\$	<u>0.00040</u> per minute
					\$	0.00092 total per minute
<i>Common</i>						
Transport	\$	7,402,100	3,864,339,356	minutes	\$	0.00160 per minute per leg (orig or term)
Transmission Terminal		2,191,542	3,864,339,356	minutes	\$	<u>0.00047</u> per minute
					\$	0.00208 total per minute
<i>Direct</i>						
Transport	\$	17,968,355	15,624,576,449	minutes	\$	0.00115 per minute
Transmission Terminal		7,634,871	15,624,576,449	minutes	\$	<u>0.00049</u> per minute
					\$	0.00164 total per minute
Tandem switch	\$	6,586,413	3,428,679,369	minutes	\$	0.00192 per minute
40%						
End office switching						
Line Port	\$	199,044,102				
		59,713,231	4,420,893	switched lines	\$	1.13 per line/month
Non-Line Port		139,330,872	70,076,256,287	actual minutes	\$	0.00199 per actual minute
Signaling network elements						
Links	\$	15,328,511	1,615	links	\$	82.36 per link per month
STP		1,596,200	45,265,106,415	TCAP+ISUP msgs	\$	0.00022 per signaling message
SCP		9,842,880	2,301,846,560	TCAP queries	\$	0.00169 per query
		3,889,431				
Transport network elements						
<i>Dedicated</i>						
Sw+Sp Transport	\$	29,368,604	539,365	trunks	\$	4.54 per DS-0 equivalent per month
Switched		9,046,536	166,143	trunks	\$	0.00045 per minute
Special		20,322,068	373,222	trunks		
Transmission Terminal		23,418,347	539,365	trunks	\$	3.62 per DS-0 equivalent per month
					\$	<u>0.00036</u> per minute
					\$	0.00081 total per minute
<i>Common</i>						
Transport	\$	7,046,193	4,416,387,835	minutes	\$	0.00135 per minute per leg (orig or term)
Transmission Terminal		2,216,987	4,416,387,835	minutes	\$	<u>0.00043</u> per minute
					\$	0.00178 total per minute
<i>Direct</i>						
Transport	\$	17,454,994	17,856,658,799	minutes	\$	0.00098 per minute
Transmission Terminal		7,908,076	17,856,658,799	minutes	\$	<u>0.00044</u> per minute
					\$	0.00142 total per minute
Tandem switch	\$	6,578,676	3,918,490,707	minutes	\$	0.00168 per minute
45%						
End office switching						
Line Port	\$	217,475,565				
		65,242,669	4,973,505	switched lines	\$	1.09 per line/month
Non-Line Port		152,232,895	78,835,788,323	actual minutes	\$	0.00193 per actual minute
Signaling network elements						
Links	\$	15,149,073	1,624	links	\$	73.67 per link per month
STP		1,435,668	50,923,244,717	TCAP+ISUP msgs	\$	0.00019 per signaling message
SCP		9,541,944	2,589,577,380	TCAP queries	\$	0.00161 per query
		4,171,461				
Transport network elements						
<i>Dedicated</i>						
Sw+Sp Transport	\$	28,828,456	606,378	trunks	\$	3.96 per DS-0 equivalent per month
Switched		8,866,762	186,504	trunks	\$	0.00039 per minute
Special		19,961,694	419,875	trunks		
Transmission Terminal		24,492,440	606,378	trunks	\$	3.37 per DS-0 equivalent per month
					\$	<u>0.00034</u> per minute
					\$	0.00073 total per minute
<i>Common</i>						
Transport	\$	6,731,922	4,968,436,314	minutes	\$	0.00116 per minute per leg (orig or term)
Transmission Terminal		2,254,784	4,968,436,314	minutes	\$	<u>0.00039</u> per minute
					\$	0.00155 total per minute

<i>Direct</i>									
	Transport	\$	16,984,383	20,088,741,148	minutes	\$	0.00085	per minute	
	Transmission Terminal		8,201,545	20,088,741,148	minutes	\$	0.00041	per minute	
						\$	0.00125	total per minute	
Tandem switch		\$	6,566,840	4,408,302,045	minutes	\$	0.00149	per minute	
50%									
End office switching		\$	233,434,157						
	Line Port		70,030,247	5,526,116	switched lines	\$	1.06	per line/month	
	Non-Line Port		163,403,910	87,595,320,359	actual minutes	\$	0.00187	per actual minute	
Signaling network elements		\$	15,076,776						
	Links		1,308,733	1,641	links	\$	66.47	per link per month	
	STP		9,313,127	56,581,383,019	TCAP+ISUP msgs	\$	0.00016	per signaling message	
	SCP		4,454,916	2,877,308,200	TCAP queries	\$	0.00155	per query	
Transport network elements									
<i>Dedicated</i>									
	Sw+Sp Transport	\$	28,407,628	673,408	trunks	\$	3.52	per DS-0 equivalent per month	
	Switched		8,727,228	206,881	trunks	\$	0.00035	per minute	
	Special		19,680,400	466,528	trunks				
	Transmission Terminal		25,453,723	673,408	trunks	\$	3.15	per DS-0 equivalent per month	
						\$	0.00031	per minute	
						\$	0.00066	total per minute	
<i>Common</i>									
	Transport	\$	6,450,176	5,520,484,794	minutes	\$	0.00101	per minute per leg (orig or term)	
	Transmission Terminal		2,282,669	5,520,484,794	minutes	\$	0.00036	per minute	
						\$	0.00137	total per minute	
<i>Direct</i>									
	Transport	\$	16,638,676	22,320,823,498	minutes	\$	0.00075	per minute	
	Transmission Terminal		8,460,288	22,320,823,498	minutes	\$	0.00038	per minute	60
						\$	0.00112	total per minute	60
Tandem switch		\$	6,581,590	4,898,113,384	minutes	\$	0.00134	per minute	
55%									
End office switching		\$	250,312,074						
	Line Port		75,093,622	6,078,728	switched lines	\$	1.03	per line/month	
	Non-Line Port		175,218,452	96,354,852,395	actual minutes	\$	0.00182	per actual minute	
Signaling network elements		\$	15,041,737						
	Links		1,198,404	1,662	links	\$	60.08	per link per month	
	STP		9,114,984	62,239,521,320	TCAP+ISUP msgs	\$	0.00015	per signaling message	
	SCP		4,728,349	3,165,039,020	TCAP queries	\$	0.00149	per query	
Transport network elements									
<i>Dedicated</i>									
	Sw+Sp Transport	\$	28,012,786	740,426	trunks	\$	3.15	per DS-0 equivalent per month	
	Switched		8,597,456	227,245	trunks	\$	0.00031	per minute	
	Special		19,415,330	513,180	trunks				
	Transmission Terminal		26,495,039	740,426	trunks	\$	2.98	per DS-0 equivalent per month	
						\$	0.00030	per minute	
						\$	0.00061	total per minute	
<i>Common</i>									
	Transport	\$	6,212,034	6,072,533,273	minutes	\$	0.00090	per minute per leg (orig or term)	
	Transmission Terminal		2,332,197	6,072,533,273	minutes	\$	0.00034	per minute	
						\$	0.00123	total per minute	
<i>Direct</i>									
	Transport	\$	16,318,452	24,552,905,848	minutes	\$	0.00066	per minute	
	Transmission Terminal		8,768,000	24,552,905,848	minutes	\$	0.00036	per minute	
						\$	0.00102	total per minute	
Tandem switch		\$	6,601,266	5,387,924,722	minutes	\$	0.00123	per minute	
60%									
End office switching		\$	264,978,757						
	Line Port		79,493,627	6,631,340	switched lines	\$	1.00	per line/month	
	Non-Line Port		185,485,130	105,114,384,431	actual minutes	\$	0.00176	per actual minute	

Signaling network elements					
	\$	15,053,839			
Links		1,104,693	1,677 links	\$	54.90 per link per month
STP		8,944,348	67,897,659,622 TCAP+ISUP msgs	\$	0.00013 per signaling message
SCP		5,004,798	3,452,769,840 TCAP queries	\$	0.00145 per query
Transport network elements					
<i>Dedicated</i>					
Sw+Sp Transport	\$	27,707,164	807,449 trunks	\$	2.86 per DS-0 equivalent per month
Switched		8,496,812	247,616 trunks	\$	0.00028 per minute
Special		19,210,352	559,833 trunks		
Transmission Terminal		27,443,566	807,449 trunks	\$	2.83 per DS-0 equivalent per month
				\$	<u>0.00028</u> per minute
				\$	0.00057 total per minute
<i>Common</i>					
Transport	\$	6,010,709	6,624,581,752 minutes	\$	0.00080 per minute per leg (orig or term)
Transmission Terminal		2,369,826	6,624,581,752 minutes	\$	<u>0.00032</u> per minute
				\$	0.00112 total per minute
<i>Direct</i>					
Transport	\$	16,064,460	26,784,988,198 minutes	\$	0.00060 per minute
Transmission Terminal		9,027,478	26,784,988,198 minutes	\$	<u>0.00034</u> per minute
				\$	0.00094 total per minute
Tandem switch	\$	6,640,475	5,877,736,060 minutes	\$	0.00113 per minute
65%					
End office switching					
Line Port	\$	281,843,869			
		84,553,161	7,183,951 switched lines	\$	0.98 per line/month
Non-Line Port		197,290,708	113,873,916,467 actual minutes	\$	0.00173 per actual minute
Signaling network elements					
	\$	15,105,014			
Links		1,025,960	1,704 links	\$	50.18 per link per month
STP		8,806,380	73,555,797,924 TCAP+ISUP msgs	\$	0.00012 per signaling message
SCP		5,272,674	3,740,500,660 TCAP queries	\$	0.00141 per query
Transport network elements					
<i>Dedicated</i>					
Sw+Sp Transport	\$	27,412,585	874,486 trunks	\$	2.61 per DS-0 equivalent per month
Switched		8,401,023	268,000 trunks	\$	0.00026 per minute
Special		19,011,562	606,486 trunks		
Transmission Terminal		28,505,604	874,486 trunks	\$	2.72 per DS-0 equivalent per month
				\$	<u>0.00027</u> per minute
				\$	0.00053 total per minute
<i>Common</i>					
Transport	\$	5,816,023	7,176,630,232 minutes	\$	0.00072 per minute per leg (orig or term)
Transmission Terminal		2,423,797	7,176,630,232 minutes	\$	<u>0.00030</u> per minute
				\$	0.00102 total per minute
<i>Direct</i>					
Transport	\$	15,835,879	29,017,070,548 minutes	\$	0.00055 per minute
Transmission Terminal		9,349,957	29,017,070,548 minutes	\$	<u>0.00032</u> per minute
				\$	0.00087 total per minute
Tandem switch	\$	6,679,886	6,367,547,399 minutes	\$	0.00105 per minute
70%					
End office switching					
Line Port	\$	296,612,207			
		88,983,662	7,736,563 switched lines	\$	0.96 per line/month
Non-Line Port		207,628,545	122,633,448,503 actual minutes	\$	0.00169 per actual minute
Signaling network elements					
	\$	16,013,340			
Links		956,507	1,722 links	\$	46.28 per link per month
STP		9,530,808	79,213,936,226 TCAP+ISUP msgs	\$	0.00012 per signaling message
SCP		5,526,025	4,028,231,480 TCAP queries	\$	0.00137 per query
Transport network elements					
<i>Dedicated</i>					
Sw+Sp Transport	\$	27,173,166	941,501 trunks	\$	2.41 per DS-0 equivalent per month
Switched		8,322,594	288,363 trunks	\$	0.00024 per minute
Special		18,850,571	653,138 trunks		
Transmission Terminal		29,508,368	941,501 trunks	\$	2.61 per DS-0 equivalent per month
				\$	<u>0.00026</u> per minute
				\$	0.00050 total per minute

<i>Common</i>							
Transport	\$	5,650,269	7,728,678,711	minutes	\$	0.00065	per minute per leg (orig or term)
Transmission Terminal		2,472,641	7,728,678,711	minutes	\$	<u>0.00029</u>	per minute
					\$	0.00094	total per minute
<i>Direct</i>							
Transport	\$	15,616,990	31,249,152,897	minutes	\$	0.00050	per minute
Transmission Terminal		9,631,757	31,249,152,897	minutes	\$	<u>0.00031</u>	per minute
					\$	0.00081	total per minute
Tandem switch	\$	6,726,927	6,857,358,737	minutes	\$	0.00098	per minute
75%							
End office switching		\$	311,973,883				
Line Port		93,592,165	8,289,175	switched lines	\$	0.94	per line/month
Non-Line Port		218,381,718	131,392,980,539	actual minutes	\$	0.00166	per actual minute
Signaling network elements		\$	16,091,053				
Links		898,735	1,735	links	\$	43.16	per link per month
STP		9,399,362	84,872,074,528	TCAP+ISUP msgs	\$	0.00011	per signaling message
SCP		5,792,956	4,315,962,300	TCAP queries	\$	0.00134	per query
Transport network elements							
<i>Dedicated</i>							
Sw+Sp Transport	\$	26,960,098	1,007,161	trunks	\$	2.23	per DS-0 equivalent per month
Switched		8,227,801	307,370	trunks	\$	0.00022	per minute
Special		18,732,297	699,791	trunks			
Transmission Terminal		30,471,303	1,007,161	trunks	\$	2.52	per DS-0 equivalent per month
					\$	<u>0.00025</u>	per minute
					\$	0.00047	total per minute
<i>Common</i>							
Transport	\$	5,508,908	8,280,727,191	minutes	\$	0.00060	per minute per leg (orig or term)
Transmission Terminal		2,514,334	8,280,727,191	minutes	\$	<u>0.00027</u>	per minute
					\$	0.00088	total per minute
<i>Direct</i>							
Transport	\$	15,444,356	33,481,235,247	minutes	\$	0.00046	per minute
Transmission Terminal		9,877,619	33,481,235,247	minutes	\$	<u>0.00030</u>	per minute
					\$	0.00076	total per minute
Tandem switch	\$	6,774,047	7,347,170,076	minutes	\$	0.00092	per minute
80%							
End office switching		\$	327,054,450				
Line Port		98,116,335	8,841,786	switched lines	\$	0.92	per line/month
Non-Line Port		228,938,115	140,152,512,575	actual minutes	\$	0.00163	per actual minute
Signaling network elements		\$	16,209,672				
Links		846,464	1,765	links	\$	39.97	per link per month
STP		9,307,479	90,530,212,830	TCAP+ISUP msgs	\$	0.00010	per signaling message
SCP		6,055,729	4,603,693,120	TCAP queries	\$	0.00132	per query
Transport network elements							
<i>Dedicated</i>							
Sw+Sp Transport	\$	26,770,088	1,074,100	trunks	\$	2.08	per DS-0 equivalent per month
Switched		8,166,255	327,656	trunks	\$	0.00021	per minute
Special		18,603,833	746,444	trunks			
Transmission Terminal		31,541,130	1,074,100	trunks	\$	2.45	per DS-0 equivalent per month
					\$	<u>0.00024</u>	per minute
					\$	0.00045	total per minute
<i>Common</i>							
Transport	\$	5,379,556	8,832,775,670	minutes	\$	0.00055	per minute per leg (orig or term)
Transmission Terminal		2,578,205	8,832,775,670	minutes	\$	<u>0.00027</u>	per minute
					\$	0.00082	total per minute
<i>Direct</i>							
Transport	\$	15,283,545	35,713,317,597	minutes	\$	0.00043	per minute
Transmission Terminal		10,193,854	35,713,317,597	minutes	\$	<u>0.00029</u>	per minute
					\$	0.00071	total per minute
Tandem switch	\$	6,833,849	7,836,981,414	minutes	\$	0.00087	per minute

85%

End office switching	\$	345,516,994							
Line Port		103,655,098	9,394,398	switched lines	\$	0.92	per line/month		
Non-Line Port		241,861,896	148,912,044,611	actual minutes	\$	0.00162	per actual minute		
Signaling network elements	\$	16,300,446							
Links		798,808	1,782	links	\$	37.36	per link per month		
STP		9,193,358	96,188,351,131	TCAP+ISUP msgs	\$	0.00010	per signaling message		
SCP		6,308,281	4,891,423,940	TCAP queries	\$	0.00129	per query		
Transport network elements									
<i>Dedicated</i>									
Sw+Sp Transport	\$	26,580,969	1,139,748	trunks	\$	1.94	per DS-0 equivalent per month		
Switched		8,084,534	346,652	trunks	\$	0.00019	per minute		
Special		18,496,435	793,097	trunks					
Transmission Terminal		32,887,076	1,139,748	trunks					
					\$	2.40	per DS-0 equivalent per month		
					\$	<u>0.00024</u>	per minute		
					\$	0.00043	total per minute		
<i>Common</i>									
Transport	\$	5,248,259	9,384,824,149	minutes	\$	0.00051	per minute per leg (orig or term)		
Transmission Terminal		2,659,026	9,384,824,149	minutes	\$	<u>0.00026</u>	per minute		
					\$	0.00077	total per minute		
<i>Direct</i>									
Transport	\$	15,113,255	37,945,399,947	minutes	\$	0.00040	per minute		
Transmission Terminal		10,576,680	37,945,399,947	minutes	\$	<u>0.00028</u>	per minute		
					\$	0.00068	total per minute		
Tandem switch	\$	6,878,401	8,326,792,752	minutes	\$	0.00083	per minute		
90%									
End office switching	\$	364,195,381							
Line Port		109,258,614	9,947,010	switched lines	\$	0.92	per line/month		
Non-Line Port		254,936,767	157,671,576,646	actual minutes	\$	0.00162	per actual minute		
Signaling network elements	\$	16,409,984							
Links		756,453	1,798	links	\$	35.06	per link per month		
STP		9,092,535	101,846,489,433	TCAP+ISUP msgs	\$	0.00009	per signaling message		
SCP		6,560,996	5,179,154,760	TCAP queries	\$	0.00127	per query		
Transport network elements									
<i>Dedicated</i>									
Sw+Sp Transport	\$	26,396,194	1,206,602	trunks	\$	1.82	per DS-0 equivalent per month		
Switched		8,025,437	366,852	trunks	\$	0.00018	per minute		
Special		18,370,757	839,750	trunks					
Transmission Terminal		33,874,972	1,206,602	trunks					
					\$	2.34	per DS-0 equivalent per month		
					\$	<u>0.00023</u>	per minute		
					\$	0.00041	total per minute		
<i>Common</i>									
Transport	\$	5,146,268	9,936,872,629	minutes	\$	0.00048	per minute per leg (orig or term)		
Transmission Terminal		2,717,265	9,936,872,629	minutes	\$	<u>0.00025</u>	per minute		
					\$	0.00073	total per minute		
<i>Direct</i>									
Transport	\$	14,972,993	40,177,482,297	minutes	\$	0.00037	per minute		
Transmission Terminal		10,870,563	40,177,482,297	minutes	\$	<u>0.00027</u>	per minute		
					\$	0.00064	total per minute		
Tandem switch	\$	6,938,570	8,816,604,091	minutes	\$	0.00079	per minute		
95%									
End office switching	\$	379,699,627							
Line Port		113,909,888	10,499,621	switched lines	\$	0.90	per line/month		
Non-Line Port		265,789,739	166,431,108,682	actual minutes	\$	0.00160	per actual minute		
Signaling network elements	\$	16,577,612							
Links		719,643	1,833	links	\$	32.72	per link per month		
STP		9,039,957	107,504,627,735	TCAP+ISUP msgs	\$	0.00008	per signaling message		
SCP		6,818,012	5,466,885,580	TCAP queries	\$	0.00125	per query		
Transport network elements									
<i>Dedicated</i>									
Sw+Sp Transport	\$	26,257,321	1,273,488	trunks	\$	1.72	per DS-0 equivalent per month		
Switched		7,981,092	387,085	trunks	\$	0.00017	per minute		

	Special	18,276,228	886,402 trunks			
	Transmission Terminal	35,029,564	1,273,488 trunks	\$	2.29	per DS-0 equivalent per month
				\$	<u>0.00023</u>	per minute
				\$	0.00040	total per minute
<i>Common</i>						
	Transport	\$ 5,061,640	10,488,921,108 minutes	\$	0.00044	per minute per leg (orig or term)
	Transmission Terminal	2,791,441	10,488,921,108 minutes	\$	<u>0.00025</u>	per minute
				\$	0.00069	total per minute
<i>Direct</i>						
	Transport	\$ 14,851,545	42,409,564,647 minutes	\$	0.00035	per minute
	Transmission Terminal	11,221,548	42,409,564,647 minutes	\$	<u>0.00026</u>	per minute
				\$	0.00061	total per minute
Tandem switch		\$ 7,008,712	9,306,415,429 minutes	\$	0.00075	per minute

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of:)	
)	
Implementation of the Local Competition Provisions in the Telecommunications Act of 1996)	CC Docket No. 96-98
)	
)	
Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers)	CC Docket No. 95-185
)	

**DECLARATION OF JOHN M. WIMMER
On Behalf of MCI WorldCom, Inc.**

Based on my personal knowledge and on information learned in the course my business duties, I, John M. Wimmer, declare as follows:

1. My name is John M. Wimmer. I am Vice President, Network Technology & Planning for MCI WORLDCOM, Inc. ("MCI WorldCom"). I am responsible for network architecture, development of new technology for MCI WorldCom and its integration into the network. I joined MCI in 1973, and since that time, I have held a wide variety of engineering and management positions with the company.

2. The purpose of this declaration is to define the loop, switching and transport unbundled network elements ("UNEs"), and to explain why competitive local exchange carriers ("CLECs") need access to these particular elements, among others, in order to offer local exchange service.

Loops and Loop-Related Elements

3. Given the loop's continuing natural monopoly characteristics, CLECs cannot successfully enter the local market unless they can efficiently interconnect to the incumbent

local exchange carrier's ("ILEC") loop — using their own network elements the ILEC's UNE platform, an ILEC packet switch (in the case of xDSL circuits). CLECs must be afforded the flexibility they need to connect to the ILEC's loops so they can choose the technology and network configuration that minimizes the cost differential between connecting those loops to their own switches as compared to connecting them to ILEC switches.

4. A loop is no longer only end to end copper from the customer premises to the ILEC end office. More than 20 percent of all loops use Digital Line Carrier (DLC) technology, and that percentage will only increase over time with further deployment of DLC. Copper wire runs from the customer premises to a DLC at a remote terminal, where the traffic from multiple loops is concentrated. When Next Generation Digital Loop Carrier (NGDLC) is used, an individual customer's traffic is no longer transported on its own channel, but rather is transported over shared channels. The capability of the loop is largely dependent upon the electronic components attached to it. Market forces punish CLECs if they are unable to choose those loop components they need to efficiently provide local services.

5. There are specific points in the ILEC's network where the customer connects with the ILEC's loop and where the loop connects to other ILEC network elements. For example, there is a customer demarcation point at which the customer's network or wiring and the ILEC's loop meets. In single family houses and some other cases, that point is at the network interface device (NID) — a cross-connect device used to connect loop facilities to inside wiring — that typically is located at a "minimum point of presence" on a customer's property, in a jack in a box on the outside of the house or a punch-down block inside a business premises. In multi-tenant office and apartment buildings (and in commercial or school campus situations), in which about one-third of all loops terminate, however, there typically also is premises wiring that

is owned or controlled by the ILEC that runs between the NID and the customer demarcation point. This wiring on the customer premises is classified in the ILECs' books as "intrabuilding network cable" and carries an outside plant accounting classification. It is not deregulated, but what has been known in the industry as "house and riser cable" and "interbuilding campus wiring."

6. CLECs must have access to the NID and to intrabuilding network cable.

While NIDs are available from manufacturers at a reasonable price, it is extremely unlikely that it would be viable for CLECs to deploy their own NIDs when they use ILEC UNE loops. Although the cost of the NID is small in absolute terms and NIDs are available from multiple sources, the cost of installing a NID is usually prohibitive. When a CLEC is leasing an unbundled ILEC loop, it would be prohibitively expensive for it to dispatch technicians to each and every customer location to install a new NID, and it would be wasteful to impose on new entrants the costs both of disconnecting loops and NIDs that are normally combined in ILEC networks and of installing new and unnecessary NIDs.

7. It is also often infeasible for CLECs to replicate intrabuilding network cable in multi-tenant buildings or on campuses. Even if it were economically feasible to do so, and space existed in the ducts, landlords rarely will agree to provide the necessary access because of the disruption associated with installing redundant parallel cable pairs. CLECs therefore need access to intrabuilding network cable to be able to provide telecommunications services to customers in those locations.

8. The other end of the ILEC's loop connects to other ILEC network elements, the CLEC's network, or the CLEC collocation at specific loop access points. There are many access points at which the loop can connect to the next network element. For example,

when a CLEC is providing its own loops to a multi-tenant building or a campus in which the intrabuilding network cable is owned or controlled by the ILEC, the CLEC will gain access to the multi-tenant building or campus at the NID, but will need access to the ILEC loop components that run from the NID to individual customer demarcation points on the far side of the intrabuilding network cable.

9. In the cases where a CLEC chooses to serve an area by building its own facilities to loop aggregation points like remote terminals, the CLEC would need access to the loop extending from the remote terminal to the customer and to the NID. Depending on the CLEC's expected market penetration and other factors, it also might need access to loop electronics such as a DSLAM, digital multiplexing, or a DLC^{1/} at a remote terminal, which are all part of the loop transmission facility.

10. Most frequently, a CLEC chooses to access all of the loop components in the ILEC central office. Depending on the technologies deployed by the ILEC, the central office termination of the loop occurs in a variety of places. First, for all-copper loops with no loop electronics, the most likely connection point is at the main distribution frame. In some cases, the ILEC and CLEC have agreed to utilize a Point of Termination (POT) bay as the interface point. In such cases, the POT bay serves as the loop access point. Second, when the ILEC deploys pair gain or other electronics in the loop and the electronics permit connection to the CLEC without further ILEC handling (e.g., dedicated IDLC, DSLAM, or multiplexing), the loop access point is at a digital cross connect bay. Again, these connections may be expanded to a POT bay if the parties have agreed to utilize POT bays.

^{1/} In this declaration, reference to DLC includes reference to the entire DLC family, including NGDLC and IDLC.

11. When a CLEC chooses to make use of the ILEC switching as a discrete element and to access the loop after the ILEC switch, the CLEC does not gain effective access to the loop until the customer's signal has been routed through an ILEC switch. Such access typically occurs when the ILEC has deployed IDLC, DSLAMs, or remote switch modules between the customer and the central office. With DSLAMs, it is not usually possible for the CLEC to access its data traffic (i.e., separate its data traffic from other carriers' data traffic) until that traffic has gone through the ILEC's packet switch. Therefore, the loop access point or a DSL-equipped loop must be after the packet switch. Because packet switches are not yet deployed at every central office, the CLEC will require a loop component (what has traditionally been called interoffice transport) to that packet switch as part of the unbundled loop network element. Generally, the CLEC will need the loop and packet switch as a combination to offer advanced services to end users. Similarly, the CLEC will require these options to offer local POTS telephone service.

12. When ordering loops, MCI WorldCom specifies the desired loop access point. Additionally, given the growing demand for advanced services, it is likely that in the future loops will increasingly be ordered either with a specified bandwidth or capability. For example, MCI WorldCom may want to specify a 2-wire and/or 4-wire DSL capable loop in such a way that it is only length or makeup that determines performance.

13. Finally, in ordering loops, MCI WorldCom needs to be able to specify whether the loop should include electronic loop components, such as DSLAMs. DSLAMs include the modems and data multiplexing required to provide advanced services over existing copper loop plant. DSLAMs are not exorbitantly expensive. For about \$8,000 to \$20,000, MCI WorldCom can purchase a DSLAM capable of serving 200 to 300 lines. But that DSLAM must

be placed in a collocated space wherever the copper portion of the loop ends. These collocations may be required in the ILEC end office or at a remote terminal. The delay and costs of collocation can be substantial. In many circumstances it is not possible or economically viable for MCI WorldCom to install its own DSLAM because no collocation space is available at the ILEC end office or remote terminal, or because the revenues that would be generated are insufficient to justify the costs of collocation, as well as the costs of purchasing and installing the DSLAM. In rural areas the density of traffic and revenue opportunity will make it difficult to justify the business costs involved. Unless ILECs are required to make their DSLAMs available as part of the loop, CLECs will be unable to provide ubiquitous DSL service, and notably will not be able to serve most rural areas. Given the low demand that can be expected in rural central offices relative to the capacity and price of DSLAMs, the most efficient use of equipment is to have the ILECs share DSLAMs with all carriers as a component of the loop.

Switching and Call Completion-Related Elements

14. MCI WorldCom needs unbundled local switching today principally in conjunction with unbundled local loops. Even if MCI WorldCom can project enough traffic volume to justify deployment of its own switches, it will be feasible for MCI WorldCom to undertake that deployment only if in so doing it is able effectively to utilize ILEC loops in conjunction with its own switches. Unfortunately, under current conditions, MCI WorldCom, when using its own switches rather than ILEC switches, faces substantial additional costs and provisioning problems in gaining access to the ILECs' loops that are not faced when the ILEC loop and switch are ordered in combination.

15. MCI WorldCom must get its customer traffic off the loops that terminate at the ILEC end offices and transport it to its own switches. Although there are potentially less

expensive ways to concentrate and transport traffic to its switches, currently the most common way to accomplish this is to collocate equipment (e.g., DLC or DSLAMs) at all the ILEC end offices whose traffic will feed into MCI WorldCom's switch. In addition, the traffic must be back hauled to MCI WorldCom's switch. When these additional costs are added, in many places it is not feasible for MCI WorldCom to deploy its own switches.

16. MCI WorldCom also is unable to make use of non-ILEC switches in combination with ILEC loops is the absence of any electronic provisioning system for the typical end to end copper loop where the ILEC already provides the loop and switch services together. When MCI WorldCom attempts to connect such ILEC loops to its own switches, a manual cross-connect must be performed at the main distribution frame (MDF) at the ILEC end office. It is far from clear whether any provisioning system relying on such manual cross-connects could support mass markets competition, in which MCI WorldCom would be asking the ILEC to deliver thousands of loops each day. In their cost studies the ILECs typically have claimed it takes 30 minutes to perform each cross-connect. At that speed, because the processes are manual it will be a lengthy and difficult matter for ILECs to handle the thousands of orders likely to be generated by a MCI WorldCom Mass Markets product launch.

17. The ILECs themselves never had the need to move so many customers on and off their system so quickly, as their networks, and their customer bases, grew incrementally. In any event, whatever may be theoretically possible, no ILEC has in fact developed the internal processes that would enable them to perform these manual activities in large volume.

18. Because MCI WorldCom needs ILEC loops in order to offer mass market services, and because MCI WorldCom is forced to use ILEC switches as well, the so-called "UNE platform" has become the only facilities-based service entry vehicle capable today of

servicing large numbers of residential customers. One critical difference between the UNE platform and an ILEC loop-CLEC switch combination is that the former can be provisioned electronically. The latter cannot. Another difference is that if MCI WorldCom chooses to use its own switch, ILECs require it to build collocation facilities. The UNE platform does not require collocation. Thus, MCI WorldCom has launched a mass market product throughout New York State using Bell Atlantic's UNE platform. Because switching is a necessary part of platform, MCI WorldCom would not be able to offer that product unless it had access to unbundled local switching.

19. Because of the substantial obstacles that face MCI WorldCom when combining the ILEC loop with its own switch, MCI WorldCom typically also leases the ILEC switch, even when it has deployed its own switches. For example, MCI WorldCom has its own switching in place in Manhattan, but does not use that capability to provide Mass Market service in Manhattan. MCI WorldCom has made that choice because Bell Atlantic is not capable of provisioning loops for MCI WorldCom in commercial volumes when MCI WorldCom uses its own switching and because of the substantial collocation cost involved with providing our own switching. If MCI WorldCom is not able to build market share by serving customers with unbundled ILEC switching prior to deploying its own switches, then the business case for deploying a switch may be delayed or undermined altogether.

20. As local networks continue to evolve, ILECs are deploying loop technologies that are almost inextricably tied to switching functions. These technologies either significantly improve the quality of local loops or reduce costs by concentrating more customers over fewer access channels. Three primary examples of this trend are remote switch modules and DLC, both of which improve transmission and concentration, and DSLAMs, which increase

bandwidth. Unless MCI WorldCom has demand sufficient to justify placing a dedicated device, all three require use of an ILEC switch to gain access to the individual customer after the customer's loop has passed through the device.^{2/}

21. As discussed above, current local network design pushes loop concentration ever closer to the end user. When the DLC and DSLAM are remotely located, MCI WorldCom has no alternative but to use the ILEC switch. Manufacturers are responding to demand for multi-hosted DLC and DSLAMs, that is, loop devices that can subtend multiple switches, but such technology is not yet widely deployed. Other methods of "grooming" circuits off of DLC are feasible but only in very limited quantities. Thus, if MCI WorldCom is to be permitted to compete for customers that are served by ILECs using these loop technologies, then MCI WorldCom also must have access to ILEC circuit and packet switches.

22. Without access to vertical features, MCI WorldCom will be impaired in several ways. It will suffer from inferior access to the switching functionality that the ILECs enjoy, and thus will not be able to provide all the services provided by the ILECs, such as call waiting or caller ID, which many customers view as necessary elements of service offerings. Moreover, restricted or costly access to these vertical features will undermine MCI WorldCom's ability to provide unique service packages and pricing plans.

23. Similarly, the switching UNE must include the customized routing embedded in the switch that is needed to complete calls — including the customized routing needed to direct a MCI WorldCom customer to its operator services and directory assistance platforms. Otherwise, MCI WorldCom will not be able to provide its customers operator services

^{2/} Older versions of DLC were not as integrated into local switching as NGDLC. But the economics of NGDLC are compelling that carriers may choose to deploy it even on all copper loops to minimize the use of (and costs associated with) local switching ports.

and DA on its own, and would have to re-brand the ILEC's service. As a corollary, the ILEC must not be allowed to insist upon using an outdated customized routing protocol that would add to MCI WorldCom's costs when more efficient customized routing protocols are available and in use to route calls today.

Transport

24. MCI WorldCom's transport needs depend on whether or not it is using its own switch. If MCI WorldCom is using its own switch, it will need dedicated transport to provide all links between ILEC end offices and the networks of other carriers, including MCI WorldCom's own network. If MCI WorldCom uses the ILEC switch (typically as part of the UNE platform), it will need access to shared transport to complete calls in the same fashion as the ILEC does.

25. Shared Transport. To provide local service to a customer using ILEC loops and switching (and particularly when using the ILEC UNE platform), MCI WorldCom must have access to unbundled shared transport. Otherwise, it would have to either build or lease dedicated transport circuits to duplicate the entire ILEC local transport network.

26. The cost of constructing or leasing dedicated facilities to end offices where a new entrant has few customers is prohibitive. Shared transport permits MCI WorldCom to take advantage of some of the ILEC's economies of scale and density. Until MCI WorldCom is able to generate sufficient volumes of traffic — and in many locations it may never be able to do so — shared transport is much more efficient than dedicated transport.

27. There are no competitive alternatives to ILEC shared transport, and there are not likely to be alternatives in the foreseeable future. The ILEC has constructed a ubiquitous transport network. It has much better information on the traffic flows (and hence transport

needs) of all the carriers in a market than will any other carrier, and also frequently enjoys superior access to rights of way. Moreover, the ILEC does not want or need to share MCI WorldCom facilities, and total MCI WorldCom traffic is not sufficient to justify investment in a shared facility. Thus, the risk associated with providing shared access is far greater for MCI WorldCom than for the ILEC, and certainly for the foreseeable future there are not likely to be alternatives to ILEC provision of shared transport.

28. Even where there is sufficient demand along a particular route for dedicated transport to be cost effective, shared transport still is necessary for MCI WorldCom because it provides the most efficient way to handle peak traffic loads. ILECs optimize their traffic transport by determining the optimal size of their dedicated trunks and sending peak traffic over shared facilities. If MCI WorldCom was denied the same access to shared transport for their peak traffic overflow, it would be placed at a significant cost disadvantage that would impair their ability to competitively provide services they seek to offer.

29. Dedicated Transport. When MCI WorldCom deploys its own switches, it needs dedicated transport for all links between ILEC end offices and the networks of other carriers, including MCI WorldCom itself. If MCI WorldCom's traffic volume between two ILEC end offices increases sufficiently, MCI WorldCom may also find it more efficient to use dedicated rather than shared transport between those ILEC end offices.

30. In the vast majority of cases in which MCI WorldCom might need dedicated transport, the ILEC is the only source for that transport. There currently are few competitive alternatives for most dedicated transport routes. Alternative providers have focused their investments on one type of link — the “entrance facility” between a CLEC switch and an ILEC end office. However, there are very few alternatives available for the “channel mileage” or

“interoffice mileage” link between the ILEC end office and the ILEC end office serving a CLEC customer.

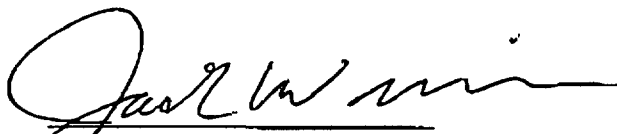
31. MCI WorldCom is committed to using alternatives to the ILECs for its transport needs wherever possible. MCI WorldCom tracks very closely the availability of alternative providers, and the company’s records show that it can self-provision transport to just over 400 ILEC end offices, though in many or most of these cases it may still require ILEC multiplexing. MCI WorldCom also can purchase transport from other CLECs and competitive access providers (“CAPs”) to reach approximately 1,200 additional ILEC end offices, again often requiring ILEC multiplexing. Almost a quarter of all CLEC and CAP transport facilities are in the New York, Los Angeles, and Chicago LATAs, but even in these LATAs, alternatives exist for only a minority of ILEC end offices.

32. The ILECs are in the best position to know where MCI WorldCom has chosen alternative providers because they will not have MCI WorldCom’s business in those locations. ILECs also will know where all the alternative transport exists, since it will be connected to their networks. Where there is competition, ILECs want MCI WorldCom’s transport business wherever possible. ILECs will not want MCI WorldCom’s transport business if MCI WorldCom cannot self-provide or buy transport from another CLEC because ILECs would rather keep the retail customer and lose the wholesale transport business. If ILECs were given the discretion to choose where they will not provide cost-based transport, they could choose to deny MCI WorldCom’s transport only where MCI WorldCom does not have other options.

33. Nor are there likely to be alternative sources for dedicated transport in many of the locations in which there is no dedicated transport today. Even as the public switched

network evolves to incorporate the facilities of new entrants as well as incumbents, the location of transport links will largely be determined by the location of incumbent switches, and it will be the incumbent who will be in the best position to provide dedicated transport facilities between these nodes. The ILECs also enjoys historical access to rights of way not always available to others, or not available on equally favorable terms. Accordingly, even if MCI WorldCom wins enough traffic to support dedicated transport, it will not necessarily be able to build out their own transport facilities to provide ubiquitous service.

I declare, under penalty of perjury, that the foregoing is true and correct. Executed on
May 26, 1999.


(INSERT FULL NAME)

